

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

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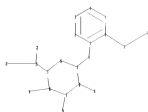
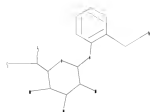
PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\*\*\*\*\* Welcome to STN International \*\*\*\*\*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	JAN 02	STN pricing information for 2008 now available
NEWS	3	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	4	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS	5	JAN 28	MARPAT searching enhanced
NEWS	6	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS	7	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS	8	JAN 28	MEDLINE and LMEEDLINE reloaded with enhancements
NEWS	9	FEB 08	STN Express, Version 8.3, now available
NEWS	10	FEB 20	PCI now available as a replacement to DPCI
NEWS	11	FEB 25	IFIREF reloaded with enhancements
NEWS	12	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS	13	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS	14	MAR 31	IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats
NEWS	15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	16	MAR 31	CA/Caplus and CASREACT patent number format for U.S. applications updated
NEWS	17	MAR 31	LPCI now available as a replacement to LDPCI
NEWS	18	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	19	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	20	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	21	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	22	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	23	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	24	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	25	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	26	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	27	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	28	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	29	JUN 25	CA/Caplus and USPAT databases updated with IPC reclassification data
NEWS	30	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	31	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated





```

chain nodes :
7 8 9 17 18 19 21 22 23
ring nodes :
1 2 3 4 5 6 11 12 13 14 15 16
chain bonds :
1-9 6-7 7-8 9-11 12-17 13-18 14-19 15-21 21-22 21-23
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 11-12 11-16 12-13 13-14 14-15 15-16
exact/norm bonds :
1-9 7-8 9-11 12-17 13-18 14-19 21-22 21-23
exact bonds :
6-7 11-12 11-16 12-13 13-14 14-15 15-16 15-21
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6
isolated ring systems :
containing 1 : 11 :

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G1:H,F,Ak

Match level :

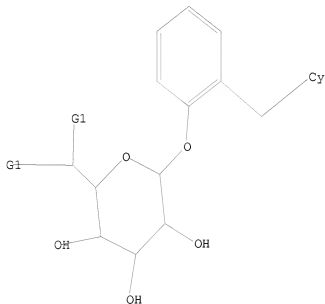
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:CLASS 11:Atom  
12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS 18:CLASS 19:CLASS 21:CLASS  
22:CLASS 23:CLASS

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 H,F,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 08:46:17 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 7264 TO ITERATE

27.5% PROCESSED 2000 ITERATIONS

7 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 140171 TO 150389

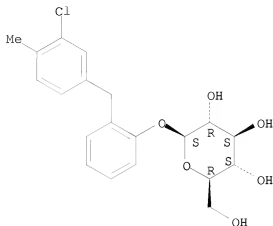
PROJECTED ANSWERS: 206 TO 810

L2 7 SEA SSS SAM L1

=> d scan

L2 7 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
IN  $\beta$ -D-Glucopyranoside, 2-[(3-chloro-4-methylphenyl)methyl]phenyl  
MF C20 H23 Cl O6

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s l1 full  
FULL SEARCH INITIATED 08:47:15 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 147250 TO ITERATE

100.0% PROCESSED 147250 ITERATIONS 320 ANSWERS  
SEARCH TIME: 00.00.03

L3 320 SEA SSS FUL L1

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 178.82 179.03

FILE 'CAPLUS' ENTERED AT 08:47:22 ON 01 JUL 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 1 Jul 2008 VOL 149 ISS 1  
FILE LAST UPDATED: 30 Jun 2008 (20080630/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> s l3 full  
L4 56 L3

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:467436 CAPLUS

DOCUMENT NUMBER: 148:491048

TITLE: Itosides J-N from *Itoa orientalis* and  
Structure-Anti-COX-2 Activity Relationship of Phenolic  
Glycosides

AUTHOR(S): Chai, Xing Yun; Song, Yue Lin; Xu, Zheng Ren; Shi, Hai  
Ming; Bai, Chang Cai; Bi, Dan; Wen, Jing; Li, Fei Fei;  
Tu, Peng Fei

CORPORATE SOURCE: Department of Natural Medicines, School of  
Pharmaceutical Sciences, Peking University Health  
Science Center, Beijing, 100083, Peop. Rep. China

SOURCE: Journal of Natural Products (2008), 71(5), 814-819  
CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society-American Society of  
Pharmacognosy

DOCUMENT TYPE: Journal

LANGUAGE: English

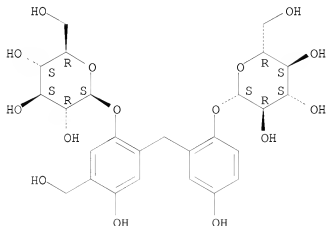
AB Two new phenolic glycosides, itosides J (1) and K (2), two new  
cylcohexenoyl glycosides, itosides L (3) and M (4), a new flavone  
glycoside, itoside N (5), and echitin (6) were isolated from the extract of  
the bark, twigs, and leaves of *Itoa orientalis*, together with 22 known  
compds. The structures were elucidated by means of UV, IR, MS, and NMR  
techniques, and the relative configuration of compound 3 was confirmed by  
X-ray crystallog. NMR data for 6 are reported for the first time.  
Compds. 1, 3, 5, and phenolic glycosides 7-22 were also assayed for  
anti-inflammatory activity against COX-2. Compds. 8, 10, 12-14, 16, 19,  
24, 26, and 27 showed significant inhibitory effects, with inhibitory  
rates of 49.7-85.3% at 10  $\mu$ M.

IT 1016275-80-1P, Itoside K  
RL: BSU (Biological study, unclassified); NPO (Natural product  
occurrence); PRP (Properties); PUR (Purification or recovery); BIOL  
(Biological study); OCCU (Occurrence); PREP (Preparation)  
(itosides from *Itoa orientalis* and COX-2 inhibitory activity of  
phenolic glycosides)

RN 1016275-80-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[2-( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-4-  
(hydroxymethyl)phenyl]methyl]-4-hydroxyphenyl (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



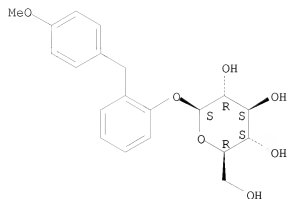
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT





L4 ANSWER 2 OF 56 CAPLUS COPYRIGHT 2008 ACS ON STN  
 ACCESSION NUMBER: 2008:282014 CAPLUS  
 DOCUMENT NUMBER: 148:487088  
 TITLE: Inhibitor binding in the human renal low- and high-affinity Na+/glucose cotransporters  
 AUTHOR(S): Pajor, Ana M.; Randolph, Kathleen M.; Kerner, Sandy A.; Smith, Chari D.  
 CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, University of Texas Medical Branch, Galveston, TX, USA  
 SOURCE: Journal of Pharmacology and Experimental Therapeutics (2008), 324(3), 985-991  
 CODEN: JPETAB; ISSN: 0022-3565  
 PUBLISHER: American Society for Pharmacology and Experimental Therapeutics  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The kidney contains two Na+/glucose cotransporters, called SGLT2 and SGLT1, arranged in series along the length of the proximal tubule. The low-affinity transporter, SGLT2, is responsible for the resorption of most of the glucose in the kidney. There is recent interest in SGLT2 as a target for the treatment of type II diabetes using selective inhibitors based on the structure of the phenylglucoside, phlorizin (phloretin-2'- $\beta$ -glucoside). In this study, we examined the inhibition of  $\alpha$ -methyl-D-glucopyranose transport by phlorizin and a new candidate drug, sergliflozin-A [(2-[4-methoxyphenyl)methyl]phenyl  $\beta$ -D-glucopyranoside), in COS-7 cells expressing hSGLT1 and hSGLT2. Inhibition by phlorizin was competitive, with  $K_i$  values of 0.3  $\mu$ M in hSGLT1 and 39 nM in hSGLT2. Inhibition by sergliflozin-A was also competitive, with  $K_i$  values of 1  $\mu$ M in hSGLT1 and 20 nM in hSGLT2. Phloretin [3-(4-hydroxyphenyl)-1-(2,4,6-trihydroxyphenyl)-1-propanone; the aglucone of phlorizin] was a less potent inhibitor, with  $IC_{50}$  values of 142  $\mu$ M in hSGLT1 and 25  $\mu$ M in hSGLT2. Site-directed mutagenesis of residues believed to be in the phlorizin binding site showed that only Cys610 is involved in inhibitor binding in the human transporters. Mutation of Cys610 in hSGLT1 to lysine resulted in an increased  $IC_{50}$  for all inhibitors. In contrast, mutagenesis of the analogous Cys615 in hSGLT2 produced the opposite effect, a decrease in  $IC_{50}$  for phlorizin and sergliflozin-A. The differences in the effects of the mutations between hSGLT1 and hSGLT2 suggest that this cysteine holds key residues in place rather than participating directly in inhibitor binding.  
 IT 360775-96-8, Sergliflozin A  
 RL: PAC (Pharmacological activity); BIOL (Biological study)  
 (inhibitor binding in the human renal low- and high-affinity sodium/glucose cotransporters)  
 RN 360775-96-8 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

36

THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:160806 CAPLUS

DOCUMENT NUMBER: 148:239450

TITLE: Preparation of benzylphenyl glucopyranoside derivatives as SGLT1 and/or SGLT2 inhibitors

INVENTOR(S): Honda, Takeshi; Oguchi, Minoru; Yoshida, Masao; Okuyama, Ryo; Ogata, Tsuneaki; Abe, Manabu; Ueda, Kenjiro; Ohsumi, Jun; Izumi, Masanori

PATENT ASSIGNEE(S): Daiichi Sankyo Company, Limited, Japan

SOURCE: PCT Int. Appl., 270pp.

CODEN: P1XXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008016132	A1	20080207	WO 2007-JP65231	20070803
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RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

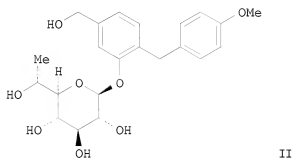
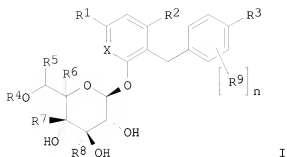
PRIORITY APPLN. INFO.:

JP 2006-213600

A 20060804

OTHER SOURCE(S): MARPAT 148:239450

GI



AB Title compds. I [R1 = H, amino, alkyl, etc.; R2 = H, halo or alkyl; R3 = alkyl, hydroxyalkyl, alkoxy, etc.; R4 = H, alkyl, acyl, etc.; R5-R8 = H or alkyl with the proviso that R5-R8 cannot be H simultaneously; R9 = halo; n = 0-4; X = CH or N] or pharmacol. acceptable salts were prepared. Thus, a multi-step synthesis of compound II, starting from benzyl 2,3,4-tri-O-benzyl-β-D-glucopyranoside, was given. In sodium-dependent glucose transporter inhibition assays, the exemplified compound II exhibited the IC50 values (nM) of 54 and 9.4 for hSGLT1 and hSGLT2, resp.,. Compds. I are claimed useful for the treatment of diabetes, hyperlipidemia, etc.

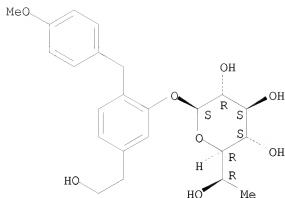
IT 1005484-94-5P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of benzylphenyl glucopyranoside derivs. as SGLT1 and/or SGLT2 inhibitors for treatment of diabetes, hyperlipidemia, etc.)

RN 1005484-94-5 CAPLUS

CN D-glycero-β-D-glucopyranoside, 5-(2-hydroxyethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

Absolute stereochemistry.



IT 1005484-40-1P 1005484-41-2P 1005484-42-3P  
 1005484-43-4P 1005484-44-5P 1005484-45-6P  
 1005484-46-7P 1005484-47-8P 1005484-48-9P  
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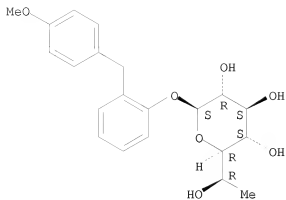
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(preparation of benzylphenyl glucopyranoside derivs. as SGLT1 and/or SGLT2  
 inhibitors for treatment of diabetes, hyperlipidemia, etc.)

RN 1005484-40-1 CAPLUS

CN D-glycero-β-D-gluco-heptopyranoside, 2-[(4-  
 methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

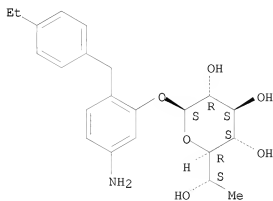
Absolute stereochemistry.



RN 1005484-41-2 CAPLUS

CN L-glycero- $\beta$ -D-glucO-Heptopyranoside, 5-amino-2-[(4-ethylphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

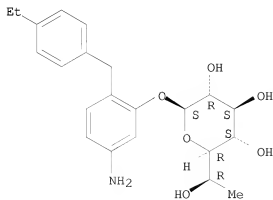
Absolute stereochemistry.



RN 1005484-42-3 CAPLUS

CN D-glycero- $\beta$ -D-glucO-Heptopyranoside, 5-amino-2-[(4-ethylphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

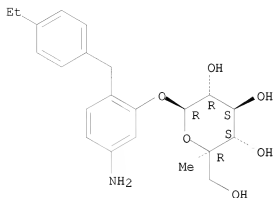
Absolute stereochemistry.



RN 1005484-43-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-amino-2-[(4-ethylphenyl)methyl]phenyl  
5-C-methyl- (CA INDEX NAME)

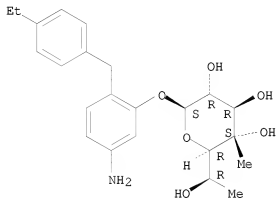
Absolute stereochemistry.



RN 1005484-44-5 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-amino-2-[(4-ethylphenyl)methyl]phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

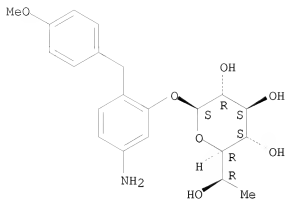
Absolute stereochemistry.



RN 1005484-45-6 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-amino-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

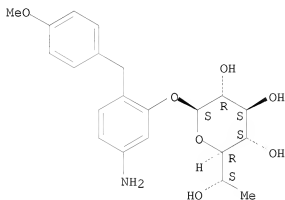
Absolute stereochemistry.



RN 1005484-46-7 CAPLUS

CN L-glycero-β-D-gluco-Heptopyranoside, 5-amino-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

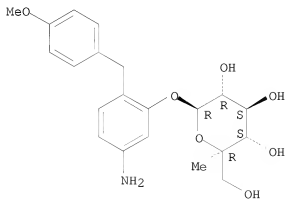
Absolute stereochemistry.



RN 1005484-47-8 CAPLUS

CN β-D-Glucopyranoside, 5-amino-2-[(4-methoxyphenyl)methyl]phenyl 5-C-methyl- (CA INDEX NAME)

Absolute stereochemistry.

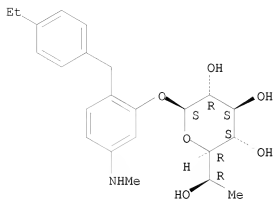


RN 1005484-48-9 CAPLUS



CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethylphenyl)methyl]-5-(methylamino)phenyl 7-deoxy- (CA INDEX NAME)

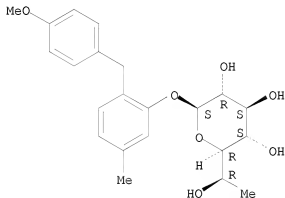
Absolute stereochemistry.



RN 1005484-50-3 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-methoxyphenyl)methyl]-5-methylphenyl 7-deoxy- (CA INDEX NAME)

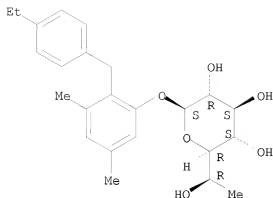
Absolute stereochemistry.



RN 1005484-51-4 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethylphenyl)methyl]-3,5-dimethylphenyl 7-deoxy- (CA INDEX NAME)

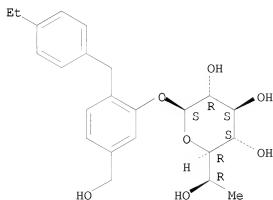
Absolute stereochemistry.



RN 1005484-53-6 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

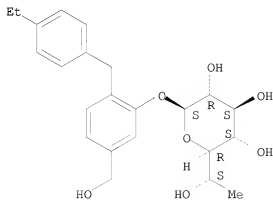
Absolute stereochemistry.



RN 1005484-54-7 CAPLUS

CN L-glycero- $\beta$ -D-glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

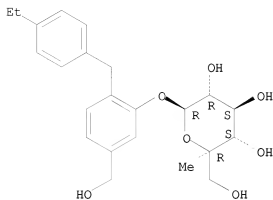
Absolute stereochemistry.



RN 1005484-55-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 5-C-methyl- (CA INDEX NAME)

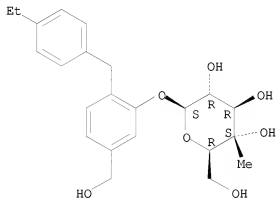
Absolute stereochemistry.



RN 1005484-56-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 4-C-methyl- (CA INDEX NAME)

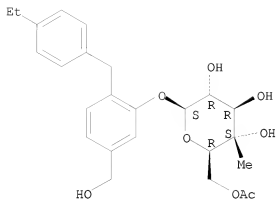
Absolute stereochemistry.



RN 1005484-57-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 4-C-methyl-, 6-acetate (CA INDEX NAME)

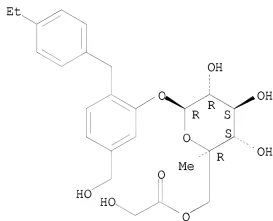
Absolute stereochemistry.



RN 1005484-58-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 5-C-methyl-, 6-(2-hydroxyacetate) (CA INDEX NAME)

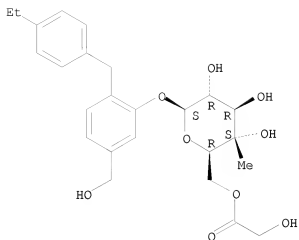
Absolute stereochemistry.



RN 1005484-59-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 4-C-methyl-, 6-(2-hydroxyacetate) (CA INDEX NAME)

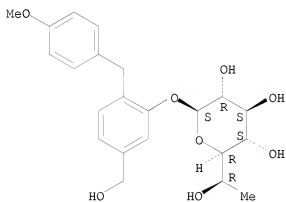
Absolute stereochemistry.



RN 1005484-60-5 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

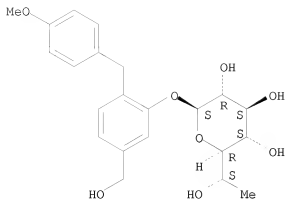
Absolute stereochemistry.



RN 1005484-61-6 CAPLUS

CN L-glycero- $\beta$ -D-glucopyranoside, 5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

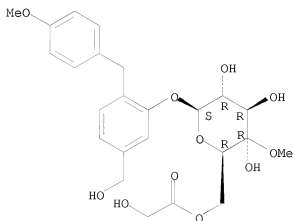
Absolute stereochemistry.



RN 1005484-62-7 CAPLUS

CN  $\beta$ -D-xylo-Hexopyranosid-4-ulose, 5-(hydroxymethyl)-2-[[4-methoxyphenyl)methyl]phenyl, methyl hemiacetal, 6-(2-hydroxyacetate) (CA INDEX NAME)

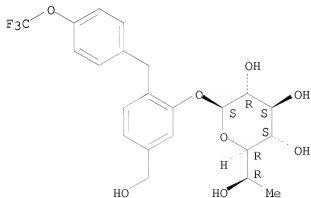
Absolute stereochemistry.



RN 1005484-63-8 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-(hydroxymethyl)-2-[[4-(trifluoromethoxy)phenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

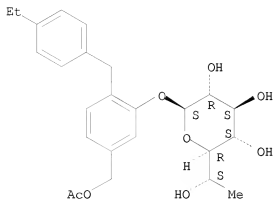
Absolute stereochemistry.



RN 1005484-64-9 CAPLUS

CN L-glycero- $\beta$ -D-glucopyranoside, 5-[(acetyloxy)methyl]-2-[(4-ethylphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

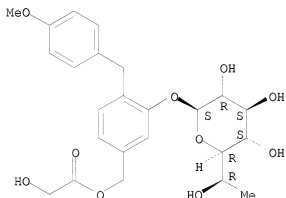
Absolute stereochemistry.



RN 1005484-65-0 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-[[[(2-hydroxyacetyl)oxy]methyl]-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

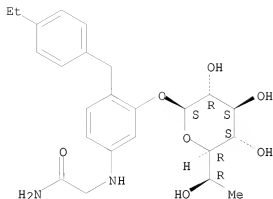
Absolute stereochemistry.



RN 1005484-66-1 CAPLUS

CN Acetamide, 2-[[[3-[(7-deoxy-D-glycero- $\beta$ -D-glucopyranosyl)oxy]-4-[(4-ethylphenyl)methyl]phenyl]amino]- (CA INDEX NAME)

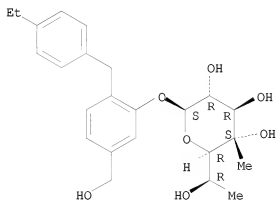
Absolute stereochemistry.



RN 1005484-68-3 CAPLUS

CN D-glycero-β-D-gluco-Heptopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

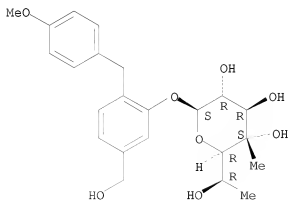
Absolute stereochemistry.



RN 1005484-69-4 CAPLUS

CN D-glycero-β-D-gluco-Heptopyranoside, 5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

Absolute stereochemistry.

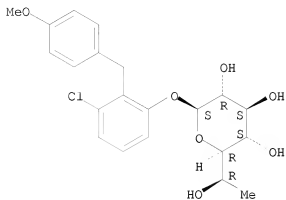


RN 1005484-70-7 CAPLUS



CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 3-chloro-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

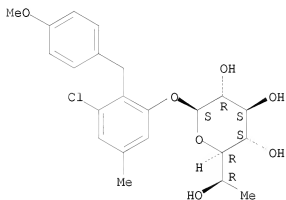
Absolute stereochemistry.



RN 1005484-71-8 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 3-chloro-2-[(4-methoxyphenyl)methyl]-5-methylphenyl 7-deoxy- (CA INDEX NAME)

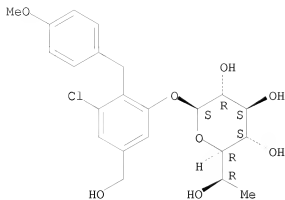
Absolute stereochemistry.



RN 1005484-72-9 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 3-chloro-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

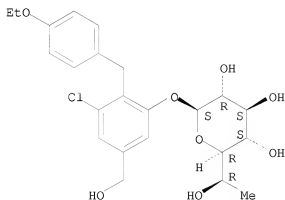
Absolute stereochemistry.



RN 1005484-73-0 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 3-chloro-2-[(4-ethoxyphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

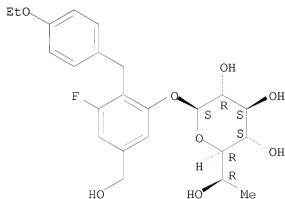
Absolute stereochemistry.



RN 1005484-74-1 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethoxyphenyl)methyl]-3-fluoro-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

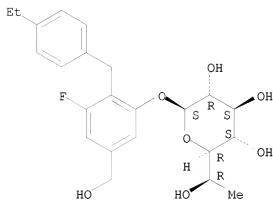
Absolute stereochemistry.



RN 1005484-75-2 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethylphenyl)methyl]-3-fluoro-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

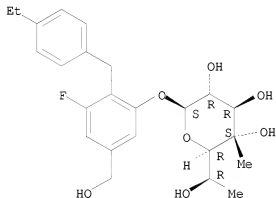
Absolute stereochemistry.



RN 1005484-76-3 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethylphenyl)methyl]-3-fluoro-5-(hydroxymethyl)phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

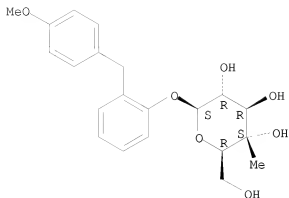
Absolute stereochemistry.



RN 1005484-77-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl 4-C-methyl- (CA INDEX NAME)

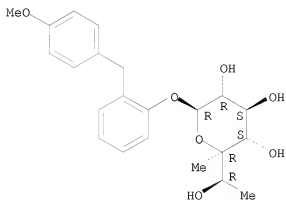
Absolute stereochemistry.



RN 1005484-78-5 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy-5-C-methyl- (CA INDEX NAME)

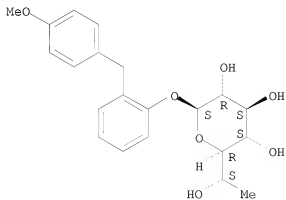
Absolute stereochemistry.



RN 1005484-79-6 CAPLUS

CN L-glycero- $\beta$ -D-glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

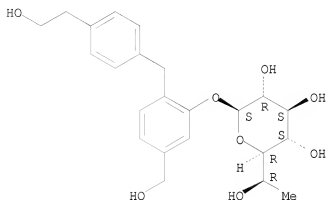
Absolute stereochemistry.



RN 1005484-80-9 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

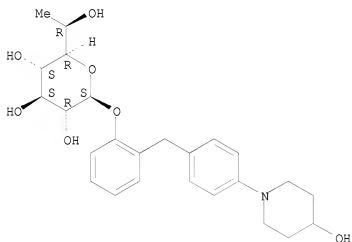
Absolute stereochemistry.



RN 1005484-81-0 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[[4-(4-hydroxy-1-piperidinyl)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

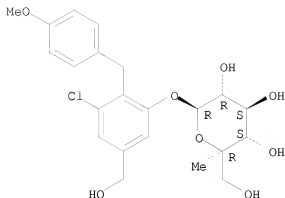
Absolute stereochemistry.



RN 1005484-82-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 3-chloro-5-(hydroxymethyl)-2-[[4-methoxyphenyl]methyl]phenyl 5-C-methyl- (CA INDEX NAME)

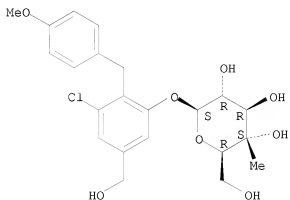
Absolute stereochemistry.



RN 1005484-83-2 CAPLUS

CN β-D-Glucopyranoside, 3-chloro-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 4-C-methyl- (CA INDEX NAME)

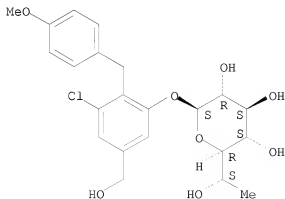
Absolute stereochemistry.



RN 1005484-84-3 CAPLUS

CN L-glycero-β-D-glucopyranoside, 3-chloro-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

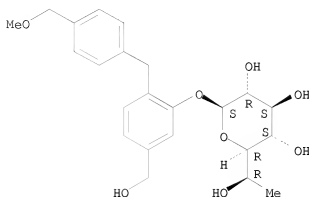
Absolute stereochemistry.



RN 1005484-85-4 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-(hydroxymethyl)-2-[[4-(methoxymethyl)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

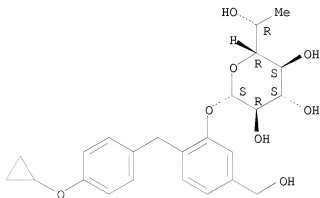
Absolute stereochemistry.



RN 1005484-86-5 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[[4-(cyclopropyloxy)phenyl]methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

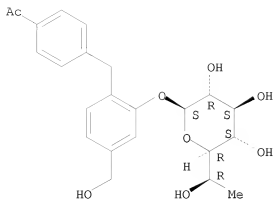
Absolute stereochemistry.



RN 1005484-87-6 CAPLUS

CN Ethanone, 1-[4-[[2-[[7-deoxy-D-glycero- $\beta$ -D-gluco-heptapyranosyl]oxy]-4-(hydroxymethyl)phenyl]methyl]phenyl]- (CA INDEX NAME)

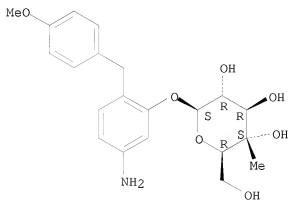
Absolute stereochemistry.



RN 1005484-88-7 CAPLUS

CN β-D-Glucopyranoside, 5-amino-2-[(4-methoxyphenyl)methyl]phenyl  
4-C-methyl- (CA INDEX NAME)

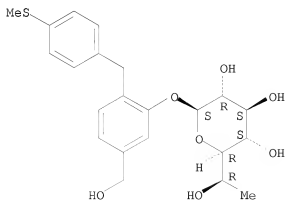
Absolute stereochemistry.



RN 1005484-89-8 CAPLUS

CN D-glycero-β-D-glucopyranoside, 5-(hydroxymethyl)-2-[[4-(methylthio)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

Absolute stereochemistry.

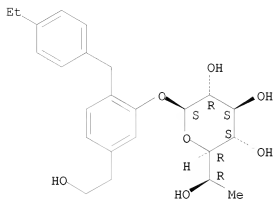


RN 1005484-90-1 CAPLUS



CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[[4-ethylphenyl)methyl]-5-(2-hydroxyethyl)phenyl 7-deoxy- (CA INDEX NAME)

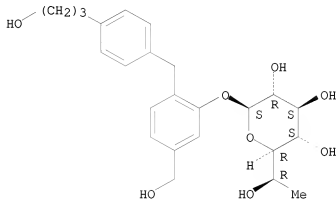
Absolute stereochemistry.



RN 1005484-91-2 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-(hydroxymethyl)-2-[[4-(3-hydroxypropyl)phenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

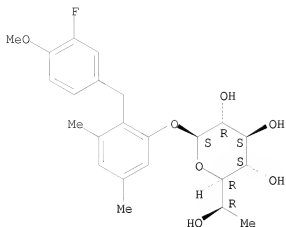
Absolute stereochemistry.



RN 1005484-92-3 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(3-fluoro-4-methoxyphenyl)methyl]-3,5-dimethylphenyl 7-deoxy- (CA INDEX NAME)

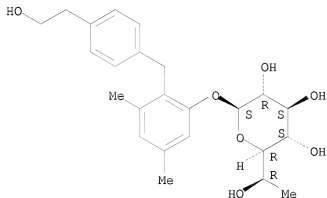
Absolute stereochemistry.



RN 1005484-93-4 CAPLUS

CN D-glycero-β-D-glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-3,5-dimethylphenyl 7-deoxy- (CA INDEX NAME)

Absolute stereochemistry.

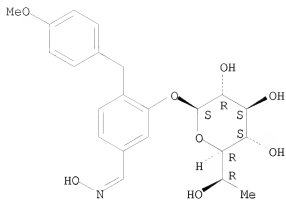


RN 1005484-95-6 CAPLUS

CN Benzaldehyde, 3-[[7-deoxy-β-D-glycero-β-D-glucopyranosyl]oxy]-4-[(4-methoxyphenyl)methyl]-, oxime (CA INDEX NAME)

Absolute stereochemistry.

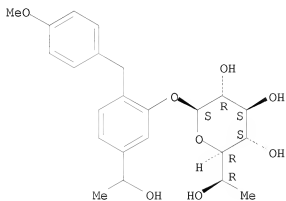
Double bond geometry unknown.



RN 1005484-96-7 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-(1-hydroxyethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

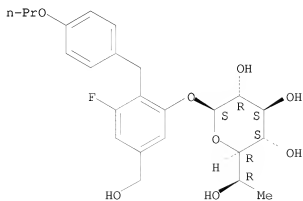
Absolute stereochemistry.



RN 1005484-97-8 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-fluoro-5-(hydroxymethyl)-2-[(4-propoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

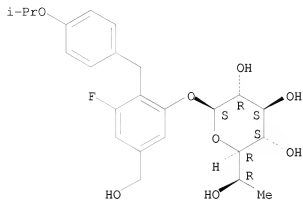
Absolute stereochemistry.



RN 1005484-98-9 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 3-fluoro-5-(hydroxymethyl)-2-[[4-(1-methylethoxy)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

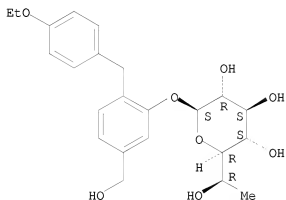
Absolute stereochemistry.



RN 1005484-99-0 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethoxyphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

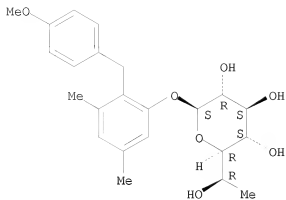
Absolute stereochemistry.



RN 1005485-00-6 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-methoxyphenyl)methyl]-3,5-dimethylphenyl 7-deoxy- (CA INDEX NAME)

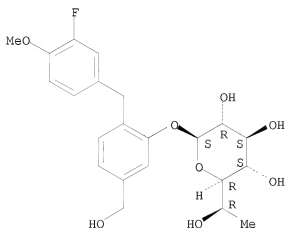
Absolute stereochemistry.



RN 1005485-02-8 CAPLUS

CN D-glycero-β-D-glucopyranoside, 2-[(3-fluoro-4-methoxyphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

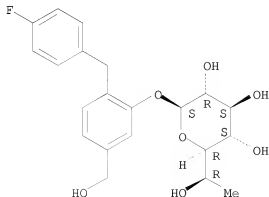
Absolute stereochemistry.



RN 1005485-03-9 CAPLUS

CN D-glycero-β-D-glucopyranoside, 2-[(4-fluorophenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

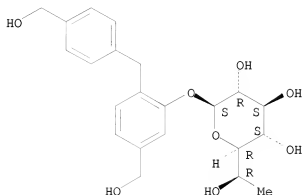
Absolute stereochemistry.



RN 1005485-04-0 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-(hydroxymethyl)-2-[[4-(hydroxymethyl)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

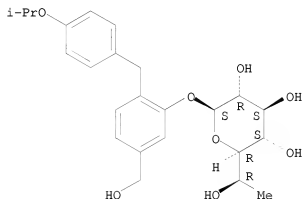
Absolute stereochemistry.



RN 1005485-05-1 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-(hydroxymethyl)-2-[[4-(1-methylethoxy)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

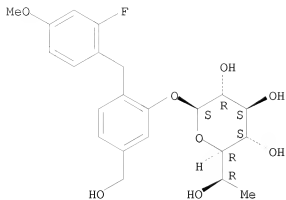
Absolute stereochemistry.



RN 1005485-06-2 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[(2-fluoro-4-methoxyphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

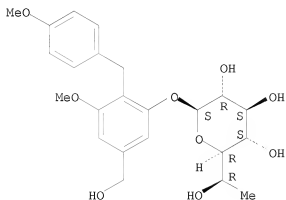
Absolute stereochemistry.



RN 1005485-07-3 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-(hydroxymethyl)-3-methoxy-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

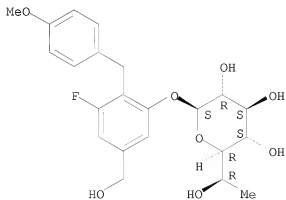
Absolute stereochemistry.



RN 1005485-08-4 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-fluoro-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

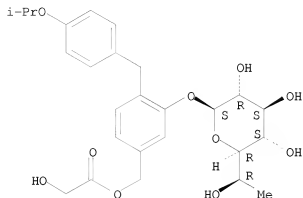
Absolute stereochemistry.



RN 1005485-09-5 CAPLUS

CN D-glycero- $\beta$ -D-glucO-Heptopyranoside, 5-[[[(2-hydroxyacetyl)oxy]methyl]-2-[[4-(1-methylethoxy)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

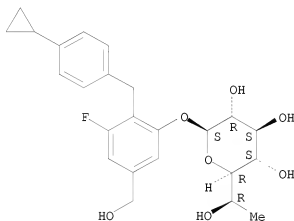
Absolute stereochemistry.



RN 1005485-10-8 CAPLUS

CN D-glycero- $\beta$ -D-glucO-Heptopyranoside, 2-[[4-(cyclopropylphenyl)methyl]-3-fluoro-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

Absolute stereochemistry.

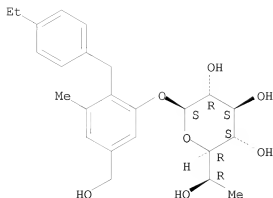


RN 1005485-11-9 CAPLUS

CN D-glycero- $\beta$ -D-glucO-Heptopyranoside, 2-[[4-(ethylphenyl)methyl]-5-(hydroxymethyl)-3-methylphenyl 7-deoxy- (CA INDEX NAME)

Absolute stereochemistry.

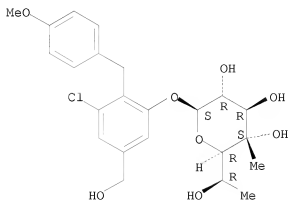




RN 1005485-12-0 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-chloro-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

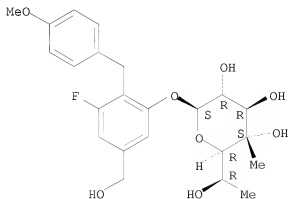
Absolute stereochemistry.



RN 1005485-13-1 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-fluoro-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

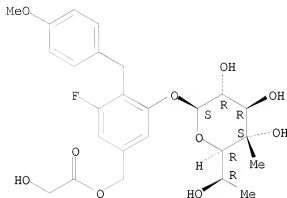
Absolute stereochemistry.



RN 1005485-14-2 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-fluoro-5-[[2-(hydroxyacetyl)oxy]methyl]-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy-4-C-methyl- (CA INDEX NAME)

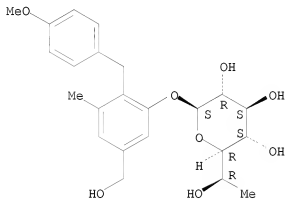
Absolute stereochemistry.



RN 1005485-15-3 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]-3-methylphenyl 7-deoxy- (CA INDEX NAME)

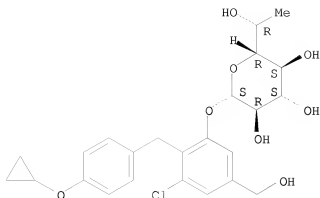
Absolute stereochemistry.



RN 1005485-16-4 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-chloro-2-[[4-(cyclopropyloxy)phenyl]methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

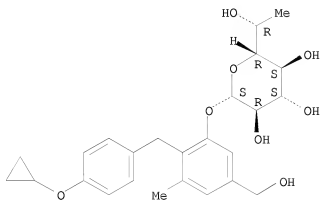
Absolute stereochemistry.



RN 1005485-17-5 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[[4-(cyclopropyloxy)phenyl]methyl]-5-(hydroxymethyl)-3-methylphenyl 7-deoxy- (CA INDEX NAME)

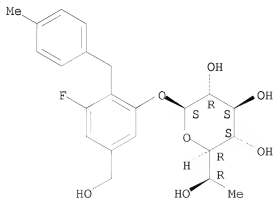
Absolute stereochemistry.



RN 1005485-18-6 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-fluoro-5-(hydroxymethyl)-2-[[4-methylphenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

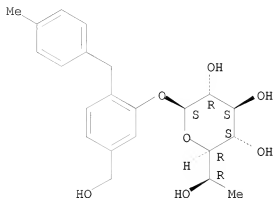
Absolute stereochemistry.



RN 1005485-19-7 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-(hydroxymethyl)-2-[(4-methylphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

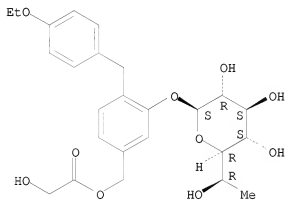
Absolute stereochemistry.



RN 1005485-20-0 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-ethoxyphenyl)methyl]-5-[[2-(2-hydroxyacetyl)oxy]methyl]phenyl 7-deoxy- (CA INDEX NAME)

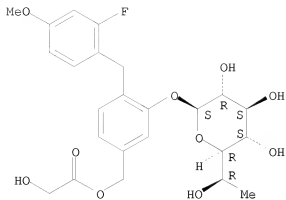
Absolute stereochemistry.



RN 1005485-21-1 CAPLUS

CN Acetic acid, 2-hydroxy-, [3-[(7-deoxy-D-glycero- $\beta$ -D-gluco-heptopyranosyl)oxy]-4-[(2-fluoro-4-methoxyphenyl)methyl]phenyl)methyl ester (CA INDEX NAME)

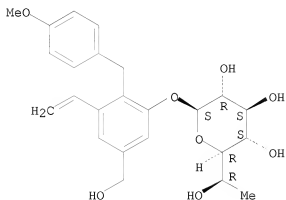
Absolute stereochemistry.



RN 1005485-22-2 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 3-ethenyl-5-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

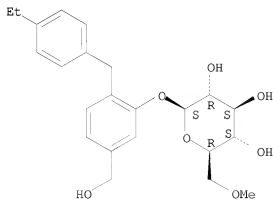
Absolute stereochemistry.



RN 1005485-26-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl 6-O-methyl- (CA INDEX NAME)

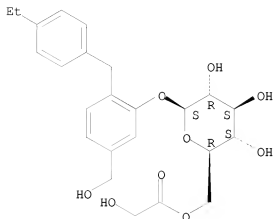
Absolute stereochemistry.



RN 1005485-27-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl, 6-(2-hydroxyacetate) (CA INDEX NAME)

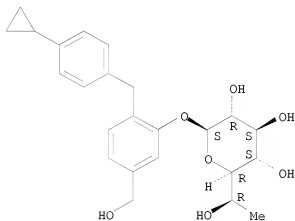
Absolute stereochemistry.



RN 1005485-33-5 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[(4-cyclopropylphenyl)methyl]-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

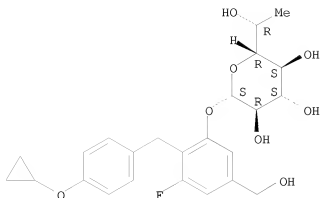
Absolute stereochemistry.



RN 1005495-30-6 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 2-[[4-(cyclopropyloxy)phenyl)methyl]-3-fluoro-5-(hydroxymethyl)phenyl 7-deoxy- (CA INDEX NAME)

Absolute stereochemistry.



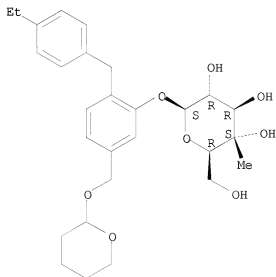
IT 1005486-23-6P 1005486-24-7P 1005486-25-8P  
 1005486-27-0P 1005486-28-1P 1005486-29-2P  
 1005486-30-5P 1005486-32-7P 1005486-33-8P  
 1005486-78-1P 1005486-91-8P 1005487-00-2P  
 1005487-06-8P 1005487-52-4P 1005488-65-2P  
 1005488-83-4P 1005489-08-6P 1005489-20-2P  
 1005489-30-4P 1005489-31-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of benzylphenyl glucopyranoside derivs. as SGLT1 and/or SGLT2  
 inhibitors for treatment of diabetes, hyperlipidemia, etc.)

RN 1005486-23-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-[[[(tetrahydro-2H-  
 pyran-2-yl)oxy]methyl]phenyl 4-C-methyl- (CA INDEX NAME)

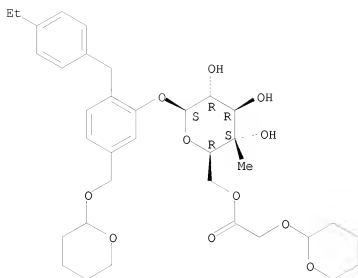
Absolute stereochemistry.



RN 1005486-24-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-[[[(tetrahydro-2H-  
 pyran-2-yl)oxy]methyl]phenyl 4-C-methyl-, 6-[2-[(tetrahydro-2H-pyran-2-  
 yl)oxy]acetate] (CA INDEX NAME)

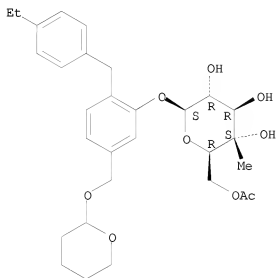
Absolute stereochemistry.



RN 1005486-25-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-[[tetrahydro-2H-pyran-2-yl]oxy]methyl]phenyl 4-C-methyl-, 6-acetate (CA INDEX NAME)

Absolute stereochemistry.

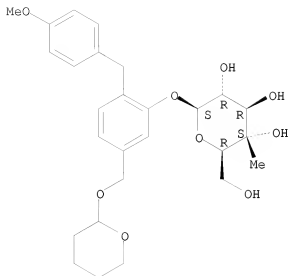


RN 1005486-27-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-5-[[tetrahydro-2H-pyran-2-yl]oxy]methyl]phenyl 4-C-methyl- (CA INDEX NAME)

Absolute stereochemistry.

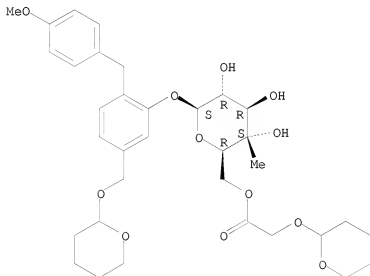




RN 1005486-28-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-5-[[4-[(4-methoxyphenyl)methyl]oxy]methyl]phenyl 4-C-methyl-, 6-[[2-[(tetrahydro-2H-pyran-2-yl)oxy]acetate]] (CA INDEX NAME)

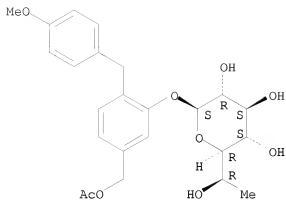
Absolute stereochemistry.



RN 1005486-29-2 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-[(acetyloxy)methyl]-2-[(4-methoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

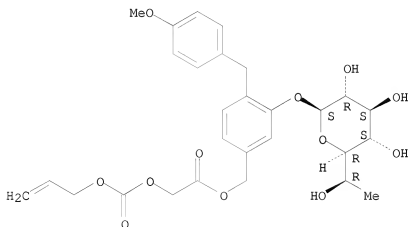
Absolute stereochemistry.



RN 1005486-30-5 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 2-[[4-methoxyphenyl)methyl]-5-[[[2-[(2-propen-1-yloxy)carbonyl]oxy]acetyl]oxy]methyl]phenyl 7-deoxy- (CA INDEX NAME)

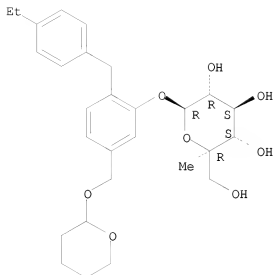
Absolute stereochemistry.



RN 1005486-32-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-ethylphenyl)methyl]-5-[[[2-[(2-propen-1-yloxy)carbonyl]oxy]acetyl]oxy]methyl]phenyl 5-C-methyl- (CA INDEX NAME)

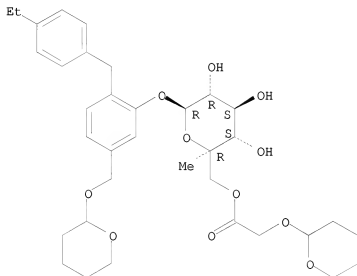
Absolute stereochemistry.



RN 1005486-33-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-[[[(tetrahydro-2H-pyran-2-yl)oxy]methyl]phenyl]-5-C-methyl-, 6-[2-[(tetrahydro-2H-pyran-2-yl)oxy]acetate] (CA INDEX NAME)

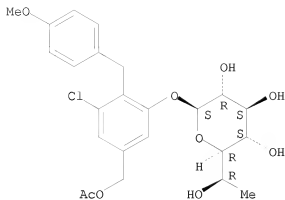
Absolute stereochemistry.



RN 1005486-78-1 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-[(acetyloxy)methyl]-3-chloro-2-[(4-methoxyphenyl)methyl]phenyl-7-deoxy- (CA INDEX NAME)

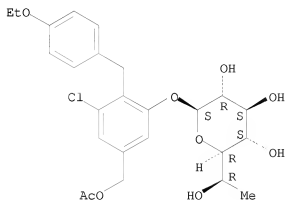
Absolute stereochemistry.



RN 1005486-91-8 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-[(acetyloxy)methyl]-3-chloro-2-[(4-ethoxyphenyl)methyl]phenyl 7-deoxy- (CA INDEX NAME)

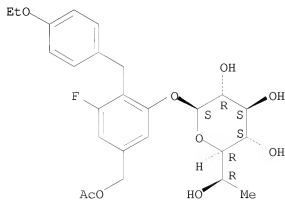
Absolute stereochemistry.



RN 1005487-00-2 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-[(acetyloxy)methyl]-2-[(4-ethoxyphenyl)methyl]-3-fluorophenyl 7-deoxy- (CA INDEX NAME)

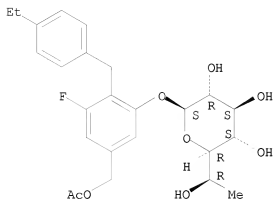
Absolute stereochemistry.



RN 1005487-06-8 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-[(acetyloxy)methyl]-2-[(4-ethylphenyl)methyl]-3-fluorophenyl 7-deoxy- (CA INDEX NAME)

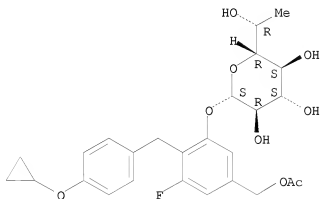
Absolute stereochemistry.



RN 1005487-52-4 CAPLUS

CN D-glycero- $\beta$ -D-gluco-Heptopyranoside, 5-[(acetyloxy)methyl]-2-[(4-(cyclopropyloxy)phenyl)methyl]-3-fluorophenyl 7-deoxy- (CA INDEX NAME)

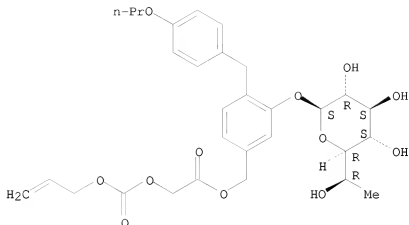
Absolute stereochemistry.



RN 1005488-65-2 CAPLUS

CN Acetic acid, 2-[[[(2-propen-1-yloxy)carbonyl]oxy]-, [3-[(7-deoxy-D-glycero- $\beta$ -D-gluco-heptopyranosyl)oxy]-4-[(4-propoxyphenyl)methyl]phenyl]methyl ester (CA INDEX NAME)

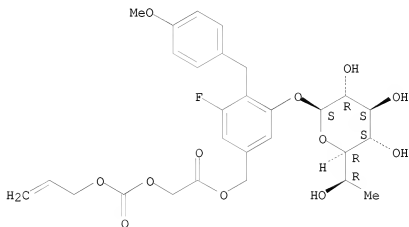
Absolute stereochemistry.



RN 1005488-83-4 CAPLUS

CN Acetic acid, 2-[[[(2-propen-1-yloxy)carbonyl]oxy]-, [3-[(7-deoxy-D-glycero-β-D-gluco-heptopyranosyl)oxy]-5-fluoro-4-[(4-methoxyphenyl)methyl]phenyl]methyl ester (CA INDEX NAME)

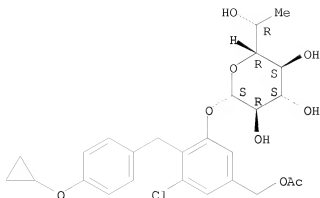
Absolute stereochemistry.



RN 1005489-08-6 CAPLUS

CN D-glycero-β-D-gluco-Heptopyranoside, 5-[(acetyloxy)methyl]-3-chloro-2-[[4-(cyclopropyloxy)phenyl]methyl]phenyl 7-deoxy- (CA INDEX NAME)

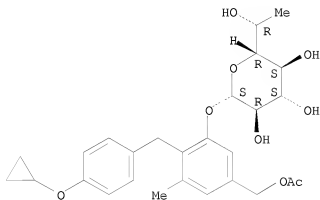
Absolute stereochemistry.



RN 1005489-20-2 CAPLUS

CN D-glycero- $\beta$ -D-glucopyranoside, 5-[(acetyloxy)methyl]-2-[[4-(cyclopropyloxy)phenyl]methyl]-3-methylphenyl 7-deoxy- (CA INDEX NAME)

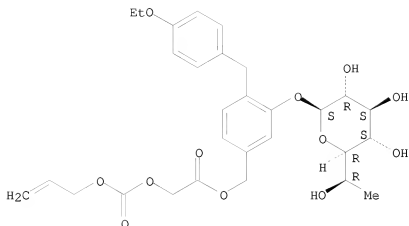
Absolute stereochemistry.



RN 1005489-30-4 CAPLUS

CN Acetic acid, 2-[[[(2-propen-1-yloxy)carbonyl]oxy]-, [3-[(7-deoxy-D-glycero- $\beta$ -D-glucopyranosyl)oxy]-4-[(4-ethoxyphenyl)methyl]phenyl]methyl ester (CA INDEX NAME)

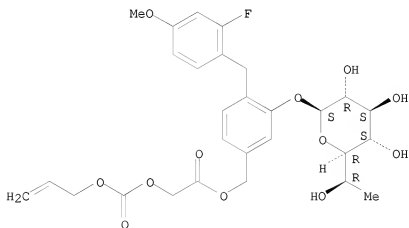
Absolute stereochemistry.



RN 1005489-31-5 CAPLUS

CN Acetic acid, 2-[(2-propen-1-yloxy)carbonyloxy]-, [3-[(7-deoxy-D-glycero- $\beta$ -D-gluco-heptopyranosyl)oxy]-4-[(2-fluoro-4-methoxyphenyl)methyl]phenyl]methyl ester (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

51

THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L4 ANSWER 4 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1231253 CAPLUS

DOCUMENT NUMBER: 148:229176

TITLE: Mangiferin identified in a screening study guided by neuraminidase inhibitory activity

AUTHOR(S): Li, Xiaofan; Ohtsuki, Takashi; Shindo, Sayaka; Sato, Masaaki; Koyano, Takashi; Preeprame, Srisompom; Kowithayakorn, Thaworn; Ishibashi, Masami

CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan

SOURCE: Planta Medica (2007), 73(11), 1195-1196

CODEN: PLMEAA; ISSN: 0032-0943

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A screening study on neuraminidase inhibitory constituents was carried out, and activity-guided fractionations of three plants, *Gouania obtusifolia*, *Zizyphus cambodiana*, and *Mangifera odorata*, led to the isolation of eleven compds. (1-11). Mangiferin was identified as a significant neuraminidase inhibitor.

IT 245447-83-0P

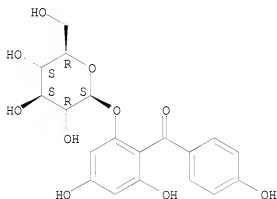
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(mangiferin identified in screening study guided by neuraminidase inhibitory activity)

RN 245447-83-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl](4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT:

21

THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1130752 CAPLUS

DOCUMENT NUMBER: 148:33960

TITLE: Study on the synthesis and bioactivity of novel mahkoside a derivatives

AUTHOR(S): Zhang, Yan-Bing; Zhang, Pi-Yong; Dai, Gui-Fu; Liu, Hong-Min

CORPORATE SOURCE: Department of Chemistry, New Drug Research and Development Center, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Synthetic Communications (2007), 37(19), 3319-3328

CODEN: SYNCAV; ISSN: 0039-7911

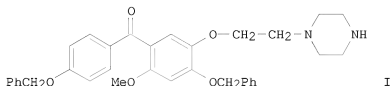
PUBLISHER: Taylor & Francis, Inc.

DOCUMENT TYPE: Journal

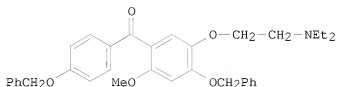
LANGUAGE: English

OTHER SOURCE(S): CASREACT 148:33960

GI



I



II

AB A series of novel Mahkoside A derivs. was synthesized, and their in vitro cytotoxic activities were evaluated against the human cancer cell line Ec-9706. A preliminary structure-activity relationship study showed compds. I and II have obvious cytotoxic activities (IC<sub>50</sub>: 30.0 and 12.5 μg/mL-1, resp.).

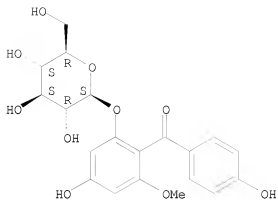
IT 934281-45-5

RL: PAC (Pharmacological activity); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)  
(synthesis and in vitro human antitumor structure activity anal. of mahkoside glycoside analogs)

RN 934281-45-5 CAPLUS

CN Methanone, [2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methoxyphenyl](4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



IT 959472-39-0P

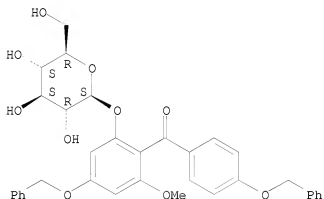
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and in vitro human antitumor structure activity anal. of mahkoside glycoside analogs)

RN 959472-39-0 CAPLUS

CN Methanone, [2-(β-D-glucopyranosyloxy)-6-methoxy-4-(phenylmethoxy)phenyl][4-(phenylmethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

12

THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2007:990524 CAPLUS  
 DOCUMENT NUMBER: 148:374517  
 TITLE: Isolation of chemical constituents from Mahkota dewa  
 AUTHOR(S): Xu, Xiangjun; Zuo, Lingxia; Qi, Weihong; Wang, Wei  
 CORPORATE SOURCE: Yinchuan University, Yinchuan, 750105, Peop. Rep. China  
 SOURCE: Huagong Shikan (2006), 20(9), 45-47  
 CODEN: HUSHFT; ISSN: 1002-154X  
 PUBLISHER: Huagong Shikan Zazhishe  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

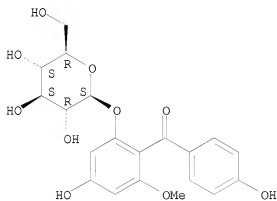
AB The chemical constituents on the pit of Mahkota dewa was extracted here. 8  
 Comps. was achieved from it and they were lauric acid, palmitic acid, Et  
 stearate,  $\beta$ -sitosterol-3-O- $\beta$ -D-glucoside, 4, 4'-Dihydroxy-  
 2methoxybenzophenone-6-O- $\beta$ -D-glucopyranoside, kaempferol-3-O- $\beta$ -D-  
 glucopyranoside, mangiferin and sucrose. Among them, 4,  
 4'-Dihydroxy-2-methoxybenzophenone-6-O- $\beta$ -D- glucopyranoside was a new  
 compound first reported.

IT 934281-45-5  
 RL: BSU (Biological study, unclassified); NPO (Natural product  
 occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (isolation of chemical constituents from Mahkota dewa)

RN 934281-45-5 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4-hydroxy-6-methoxyphenyl] (4-  
 hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 7 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:987514 CAPLUS

DOCUMENT NUMBER: 148:303404

TITLE: Isoquinoline alkaloids from *Corydalis taliensis*  
Wu, Ying-Rui; Zhao, You-Xing; Liu, Yu-Qing; Zhou, Jun  
AUTHOR(S):  
CORPORATE SOURCE: State Key Laboratory of Phytochemistry and Plant  
Resources in West China, Kunming Institute of Botany,  
Chinese Academy of Sciences, Kunming, 650204, Peop.  
Rep. China

SOURCE: Zeitschrift fuer Naturforschung, B: Chemical Sciences  
(2007), 62(9), 1199-1202

PUBLISHER: Verlag der Zeitschrift fuer Naturforschung  
DOCUMENT TYPE: Journal

LANGUAGE: English

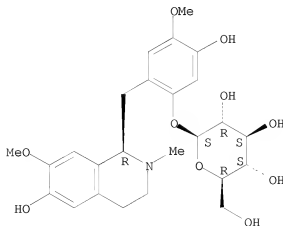
AB *Corydalis taliensis* Franch is a perennial herb used for treatment of  
rheumatic arthritis, toothache, and hepatitis. The chemical investigation of  
this plant resulted in the isolation of a new compound, named taliensineside  
(1). Its structure was identified on the basis of spectral evidence. In  
addition, thirteen known isoquinoline alkaloids (2-14) were isolated and  
identified by spectroscopic anal. and comparison of their spectral data  
with those reported previously.

IT 1009297-50-0P, Taliensineside  
RL: NPO (Natural product occurrence); PRP (Properties); PUR (Purification  
or recovery); BIOL (Biological study); OCCU (Occurrence); PREP  
(Preparation)  
(isoquinoline alkaloids from *Corydalis taliensis*)

RN 1009297-50-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-hydroxy-4-methoxy-2-[[[(1R)-1,2,3,4-tetrahydro-  
6-hydroxy-7-methoxy-2-methyl-1-isoquinolinyl]methyl]phenyl] (CA INDEX  
NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2007:987313 CAPLUS  
 DOCUMENT NUMBER: 148:280221  
 TITLE: Determination of the chemical structure of antioxidant compound benzophenone glycoside from n-butanol extracts of the fruits of Mahkota dewa (*Phaleria macrocarpa* (Scheff) Boerl.)  
 AUTHOR(S): Tambunan, Risma Marisi; Simanjuntak, Partomuan  
 CORPORATE SOURCE: Fakultas Farmasi, Universitas Pancasila, Indonesia  
 SOURCE: Majalah Farmasi Indonesia (2006), 17(4), 184-189  
 CODEN: MFINFF; ISSN: 0126-1037  
 PUBLISHER: Fakultas Farmasi UGM  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB In continuing of chemical study research on the parts of the fruits of Mahkota dewa, we have isolated one antioxidant compound benzophenone glycoside from n-butanol extract Isolation and purification by column chromatog.

(SiO<sub>2</sub>, chloroform-methanol) and determination of chemical structure based on interpretation spectra of UV, IR (IR) and NMR 1 dimension (1H & 13C NMR), 2 dimension (1H-1H COSY, 13C-1H COSY, HMBC). Based on spectroscopic data, the compound was identified as 6,4',-dihydroxy-4- methoxybenzophenone-2-O- $\alpha$ -D-glucopyranoside.

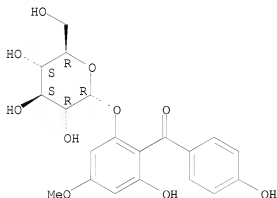
IT 1007385-84-3

RL: BSU (Biological study, unclassified); BIOL (Biological study) (structure of antioxidant compound benzophenone glycoside from fruits of Mahkota dewa)

RN 1007385-84-3 CAPLUS

CN Methanone, [2-( $\alpha$ -D-glucopyranosyloxy)-6-hydroxy-4-methoxyphenyl] (4-hydroxyphenyl)- (CA INDEX NAME)

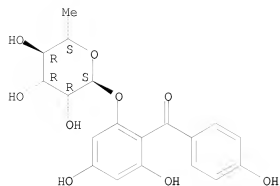
Absolute stereochemistry.



L4 ANSWER 9 OF 56 CAPLUS COPYRIGHT 2008 ACS ON STN  
 ACCESSION NUMBER: 2007:814203 CAPLUS  
 DOCUMENT NUMBER: 147:158495  
 TITLE: Laxative and food containing the same  
 INVENTOR(S): Iinuma, Munekazu; Hara, Hideaki; Oyama, Masayoshi  
 PATENT ASSIGNEE(S): Nagoya Industrial Science Research Institute, Japan  
 SOURCE: PCT Int. Appl., 29pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007083594	A1	20070726	WO 2007-JP50406	20070115
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
JP 2007217398	A	20070830	JP 2006-213784	20060804
PRIORITY APPLN. INFO.:			JP 2006-10089	A 20060118
			JP 2006-213784	A 20060804
AB	It is intended to provide a laxative with a gentle cathartic action and reduced diarrhea episodes and a food containing the same. A laxative containing genkwanin 5-O- $\beta$ -primeveroside as an active ingredient. A laxative containing iriflophenone 2-O- $\alpha$ -rhamnoside as an active ingredient. A laxative containing Aquilaria agallocha leaf extract containing genkwanin 5-O- $\beta$ -primeveroside as an active ingredient. A laxative containing Aquilaria agallocha leaf which is the origin of Aquilaria agallocha leaf as an active ingredient. A food containing any of the laxatives.			
IT	943989-68-2P RL: DMA (Drug mechanism of action); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (Aquilaria agallocha leaf extract containing genkwanin 5-O- $\beta$ -primeveroside and iriflophenone 2-O- $\alpha$ -rhamnoside as laxatives and health foods)			
RN	943989-68-2 CAPLUS			
CN	Methanone, [2-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-4,6-dihydroxyphenyl](4-hydroxyphenyl)- (CA INDEX NAME)			

Absolute stereochemistry.



REFERENCE COUNT:

2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT





L4 ANSWER 11 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:110604 CAPLUS

DOCUMENT NUMBER: 146:169565

TITLE: Simultaneous determination of benzophenones and gentisein in *Hypericum annulatum moris* by high-performance liquid chromatography

AUTHOR(S): Zheleva-Dimitrova, D.; Gevrenova, R.; Nedialkov, P.; Kitanov, G.

CORPORATE SOURCE: Department of Pharmacognosy, Faculty of Pharmacy, Medical University Sofia, Sofia, 1000, Bulg.

SOURCE: Phytochemical Analysis (2006), Volume Date 2007, 18(1), 1-6

CODEN: PHANEL; ISSN: 0958-0344

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The content of the benzophenones, hypericophenonoside, neoannulatophenonoside, annulatophenonoside, annulatophenone, acetylannulatophenonoside and the xanthone derivative gentisein have been determined in aerial parts, leaves, flowers and stems of *Hypericum annulatum Moris*. Extraction of samples with methanol by magnetic stirring at room temperature

allowed a good recovery of analytes (from 90.70% for gentisein to 103.81% for annulatophenonoside) and the precision of the entire procedure was <6.05%. The subsequent HPLC separation and quantification was achieved using a Hypersil ODS C18 column and UV detection at 290 nm. The mobile phase comprised methanol and 20 mM potassium dihydrogen phosphate (adjusted to a pH of 3.19 with o-phosphoric acid), and gradient elution mode was applied. The detection limits were 0.03, 0.02 and 0.001 µg/mL for hypericophenonoside, acetylannulatophenonoside and gentisein, resp. The total amts. of the phenolic compds. assayed ranged from 10.92 mg/g in stems to 82.86 mg/g in leaves. Hypericophenonoside was the dominant benzophenone present in the majority of the plant samples, being present in amts. between 7.54 ± 0.25 mg/g in stems and 64.22 ± 2.44 mg/g in leaves. Hypericophenonoside accounted for up to 77.50% of the components found in the leaves, whereas annulatophenonoside (6.29 ± 0.15 mg/g) and acetylannulatophenonoside (8.95 ± 0.09 mg/g) were detected in much lower quantities. In contrast to leaves, flowers showed a tendency towards higher contents of gentisein (9.35 ± 0.07 mg/g) and neoannulatophenonoside (4.72 ± 0.04 mg/g) than the other parts assayed.

IT 366493-03-0 909005-71-6

RL: ANT (Analyte); ANST (Analytical study)

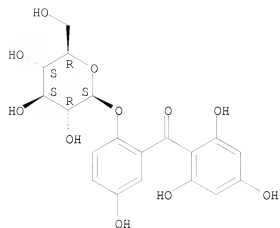
(determination of benzophenones and gentisein in *Hypericum annulatum moris*)

by high-performance liquid chromatog.)

RN 366493-03-0 CAPLUS

CN Methanone, [2-(β-D-glucopyranosyloxy)-5-hydroxyphenyl] (2,4,6-trihydroxyphenyl)- (CA INDEX NAME)

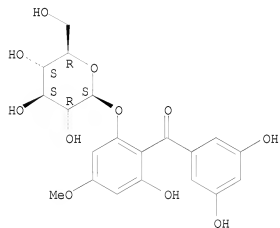
Absolute stereochemistry. Rotation (+).



RN 909005-71-6 CAPLUS

CN Methanone, (3,5-dihydroxyphenyl)[2-(β-D-glucopyranosyloxy)-6-hydroxy-4-methoxyphenyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT:

25

THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:35418 CAPLUS

DOCUMENT NUMBER: 146:114753

TITLE: Sergliflozin, a novel selective inhibitor of low-affinity sodium glucose cotransporter (SGLT2), validates the critical role of SGLT2 in renal glucose reabsorption and modulates plasma glucose level

AUTHOR(S): Katsuno, Kenji; Fujimori, Yoshikazu; Takemura, Yukiko; Hiratochi, Masahiro; Itoh, Fumiaki; Komatsu, Yoshimitsu; Fujikura, Hideki; Isaji, Masayuki

CORPORATE SOURCE: Discovery Research Laboratory II, R&D, Kissei Pharmaceutical Co., Ltd., Azumino, Japan

SOURCE: Journal of Pharmacology and Experimental Therapeutics (2007), 320(1), 323-330  
CODEN: JPETAB; ISSN: 0022-3565

PUBLISHER: American Society for Pharmacology and Experimental Therapeutics

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The low-affinity sodium glucose cotransporter (SGLT2), which is expressed specifically in the kidney, plays a major role in renal glucose resorption in the proximal tubule. We have discovered sergliflozin, a prodrug of a novel selective SGLT2 inhibitor, based on benzylphenol glucoside. In structure, it belongs to a new category of SGLT2 inhibitors and its skeleton differs from that of phlorizin, a nonselective SGLT inhibitor. We investigated its pharmacol. properties and potencies in vitro and in vivo. By examining a Chinese hamster ovary-K1 cell line stably expressing either human SGLT2 or human high-affinity sodium glucose cotransporter (SGLT1), we found sergliflozin-A (active form) to be a highly selective and potent inhibitor of human SGLT2. At pharmacol. doses, sergliflozin, sergliflozin-A, and its aglycon had no effects on facilitative glucose transporter 1 activity, which was inhibited by phloretin (the aglycon of phlorizin). The transport maximum for glucose in the kidney was reduced by sergliflozin-A in normal rats. As a result of this effect, orally administered sergliflozin increased urinary glucose excretion in mice, rats, and dogs in a dose-dependent manner. In an oral glucose tolerance test in diabetic rats, sergliflozin exhibited glucose-lowering effects independently of insulin secretion. Any glucose excretion induced by sergliflozin did not affect normoglycemia or electrolyte balance. These data indicate that selective inhibition of SGLT2 increases urinary glucose excretion by inhibiting renal glucose resorption. As a representative of a new category of antidiabetic drugs, sergliflozin may provide a new and unique approach to the treatment of diabetes mellitus.

IT 408504-26-7, Sergliflozin

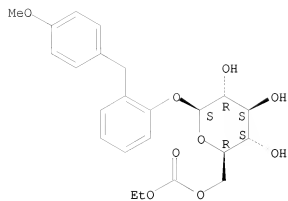
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(sergliflozin, a novel selective inhibitor of low-affinity sodium glucose cotransporter (SGLT2), validates the critical role of SGLT2 in renal glucose reabsorption and modulates plasma glucose level)

RN 408504-26-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-(ethyl carbonate) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

35

THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:672038 CAPLUS

DOCUMENT NUMBER: 145:305608

TITLE: Cytoprotective effects of 5 benzophenones and a xanthone from *Hypericum annulatum* in models of epirubicin-induced cytotoxicity: SAR-analysis and mechanistic investigations

AUTHOR(S): Momekov, Georgi; Nedialkov, Paraskev T.; Kitanov, Gerassim M.; Zheleva-Dimitrova, Dimitrina Zh.; Tzanova, Tzvetomira; Girreser, Ulrich; Karaivanova, Margarita

CORPORATE SOURCE: Lab. of Molecular Pharmacology and Experimental Chemotherapy, Department of Pharmacology and Toxicology, Faculty of Pharmacy, Medical University-Sofia, Bulg.

SOURCE: Medicinal Chemistry (2006), 2(4), 377-384

CODEN: MCEHAJ; ISSN: 1573-4064

PUBLISHER: Bentham Science Publishers Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new benzophenone O-glucoside neoannulatophenonoside (1) together with the known pinocembrin-7-O-glucoside were isolated from the aerial parts of *Hypericum annulatum* Moris (Guttiferae). The former was identified as 3',5',6-trihydroxy-4-methoxybenzophenone-2-O- $\beta$ -D-glucopyranoside by means of chemical and phys. evidence. The cytoprotective effects of the new compound together with the previously isolated from this species hypericophenonoside (2), annulatophenone (3), annulatophenonoside (4), acetylannulatophenonoside (5) and 1,3,7-trihydroxyxanthone (6) were evaluated in a model of epirubicin-induced cellular toxicity in K-562 cells. While the benzophenone O-glycosides 1, 2, 4 and 5 exerted substantial cytoprotective effects against the epirubicin cytotoxicity in K-562 cells the aglycons 3 and 6 lacked any significant cytoprotective activity. Biochem. investigations aimed at evaluating the free-radical scavenging activity of the tested compds. as well as their effects on the cellular glutathione stores were carried out as well, aiming at unravelling the mechanisms of cytoprotection. Finally, the ability of 1, 4 and 5 to ameliorate epirubicin-induced anticlonogenic effects on bone marrow cells colony forming units, in vitro were also evaluated. Taken together, the exptl. data indicate that the benzophenone glycosides isolated from *H. annulatum* have a substantial cytoprotective potential against the toxic effects induced by epirubicin and necessitates further detailed pharmacol. evaluation of these compds. as possible chemoprotective/radioprotective agents.

IT 366493-03-0P, Hypericophenonoside 909005-71-6P

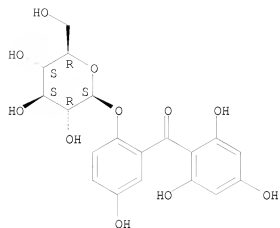
RL: PAC (Pharmacological activity); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(cytoprotective effects of 5 benzophenones and a xanthone from *Hypericum annulatum* in models of epirubicin-induced cytotoxicity and SAR-anal. and mechanistic investigations)

RN 366493-03-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-5-hydroxyphenyl](2,4,6-trihydroxyphenyl)- (CA INDEX NAME)

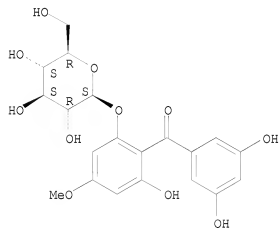
Absolute stereochemistry. Rotation (+).



RN 909005-71-6 CAPLUS

CN Methanone, (3,5-dihydroxyphenyl)[2-(β-D-glucopyranosyloxy)-6-hydroxy-4-methoxyphenyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

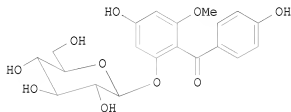


REFERENCE COUNT:

34

THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:616744 CAPLUS  
 DOCUMENT NUMBER: 146:418308  
 TITLE: Chemical constituents from Mahkota dewa  
 AUTHOR(S): Zhang, Yan-Bing; Xu, Xiang-Jun; Liu, Hong-Min  
 CORPORATE SOURCE: New Drug Research and Development Centre, Zhengzhou  
 University, Zhengzhou, 450052, Peop. Rep. China  
 SOURCE: Journal of Asian Natural Products Research (2005),  
 Volume Date 2006, 8(1-2), 119-123  
 CODEN: JANRFI; ISSN: 1028-6020  
 PUBLISHER: Taylor & Francis Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



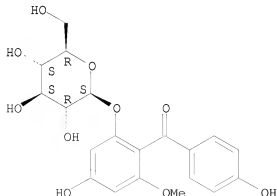
I

AB A new phenolic glycoside (I), mahkoside A, together with six known compds. including mangiferin (2), kaempferol-3-O- $\beta$ -D-glucoside (3), dodecanoic acid (4), palmitic acid (5) Et stearate (6) and sucrose (7), were isolated from the pit of Mahkota dewa (*Phaleria macrocarpa*). Their structures were identified on the basis of spectroscopic anal. All the compds. were isolated from the title plant for the first time.

IT 934281-45-5P, Mahkoside A  
 RL: NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (chemical constituents from *Phaleria macrocarpa*)

RN 934281-45-5 CAPLUS  
 CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4-hydroxy-6-methoxyphenyl](4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



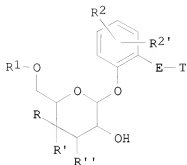
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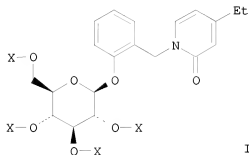


L4 ANSWER 15 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:544481 CAPLUS  
 DOCUMENT NUMBER: 145:45943  
 TITLE: Preparation of phenyl- $\beta$ -D-glucopyranosides as  
 antidiabetic agents  
 INVENTOR(S): Mederski, Werner; Van Amsterdam, Christoph; Burger,  
 Christa; Greiner, Hartmut  
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
 SOURCE: PCT Int. Appl., 63 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006058597	A1	20060608	WO 2005-EP11875	20051107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
DE 102004058449	A1	20060614	DE 2004-102004058449	20041203
AU 2005312142	A1	20060608	AU 2005-312142	20051107
CA 2589105	A1	20060608	CA 2005-2589105	20051107
EP 1817323	A1	20070815	EP 2005-811335	20051107
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 101068823	A	20071107	CN 2005-80041282	20051107
JP 2008521842	T	20080626	JP 2007-543719	20051107
MX 200706397	A	20070622	MX 2007-6397	20070529
KR 2007085568	A	20070827	KR 2007-712197	20070530
US 20070299065	A1	20071227	US 2007-792133	20070601
IN 2007KN02398	A	20070817	IN 2007-KN2398	20070629
PRIORITY APPLN. INFO.:			DE 2004-102004058449A	20041203
			WO 2005-EP11875	W 20051107
OTHER SOURCE(S):		CASREACT 145:45943; MARPAT 145:45943		
GI				



I



II

AB Title compds. I [T = heterocycle with 1-3 N or O atoms with provisos; E = (CH<sub>2</sub>)<sub>n</sub>; R, R' = OH, H, F, etc.; R'' = OH, F; R<sub>1</sub> = H, COOA; R<sub>2</sub>, R<sub>2</sub>' = H, halo, A, etc.; A = alkyl with provisos; n = 1-2] and their pharmaceutically acceptable salts and formulations were prepared For example, hydrolysis of tetraacetate II (X = COCH<sub>3</sub>) afforded phenylglucopyranoside II (X = H) in 72% yield. Compds. I are claimed to be useful as antidiabetic agents.

IT 889870-13-7P 889870-14-8P 889870-16-0P  
889870-18-2P 889870-19-3P 889870-20-6P  
889870-23-9P 889870-25-1P 889870-26-2P  
889870-27-3P 889870-28-4P 889870-31-9P  
889870-33-1P

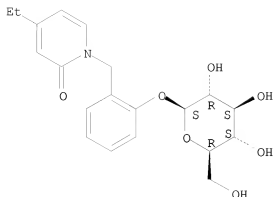
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of phenyl-β-D-glucopyranosides as antidiabetic agents)

RN 889870-13-7 CAPLUS

CN 2(1H)-Pyridinone, 4-ethyl-1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-  
(CA INDEX NAME)

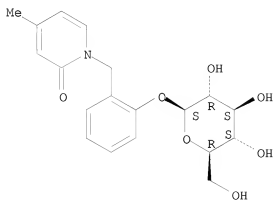
Absolute stereochemistry.



RN 889870-14-8 CAPLUS

CN 2(1H)-Pyridinone, 1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-4-methyl- (CA INDEX NAME)

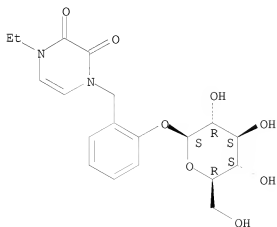
Absolute stereochemistry.



RN 889870-16-0 CAPLUS

CN 2,3-Pyrazinedione, 1-ethyl-4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-1,4-dihydro- (CA INDEX NAME)

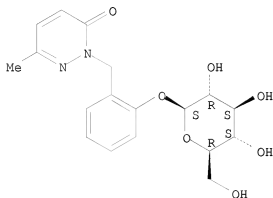
Absolute stereochemistry.



RN 889870-18-2 CAPLUS

CN 3(2H)-Pyridazinone, 2-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-6-methyl- (CA INDEX NAME)

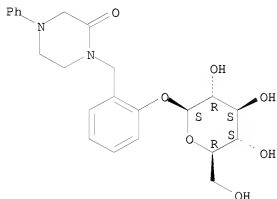
Absolute stereochemistry.



RN 889870-19-3 CAPLUS

CN Piperazinone, 1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-4-phenyl-(9CI) (CA INDEX NAME)

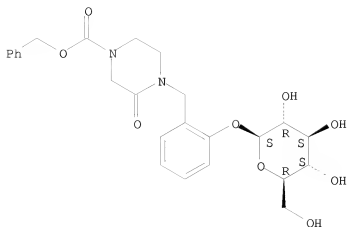
Absolute stereochemistry.



RN 889870-20-6 CAPLUS

CN 1-Piperazinecarboxylic acid, 4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-3-oxo-, phenylmethyl ester (CA INDEX NAME)

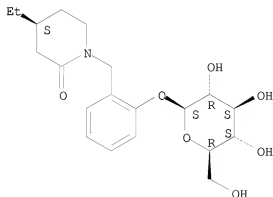
Absolute stereochemistry.



RN 889870-23-9 CAPLUS

CN 2-Piperidinone, 4-ethyl-1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-, (4S)- (CA INDEX NAME)

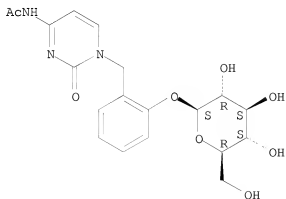
Absolute stereochemistry.



RN 889870-25-1 CAPLUS

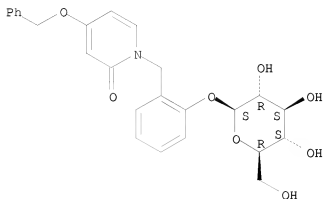
CN Acetamide, N-[1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]- (CA INDEX NAME)

Absolute stereochemistry.



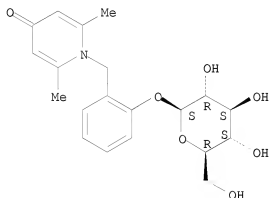
RN 889870-26-2 CAPLUS  
 CN 2(1H)-Pyridinone, 1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-4-(phenylmethoxy)- (CA INDEX NAME)

Absolute stereochemistry.



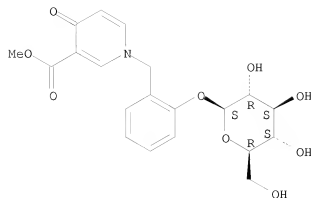
RN 889870-27-3 CAPLUS  
 CN 4(1H)-Pyridinone, 1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-2,6-dimethyl- (CA INDEX NAME)

Absolute stereochemistry.



RN 889870-28-4 CAPLUS  
 CN 3-Pyridinecarboxylic acid, 1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-1,4-dihydro-4-oxo-, methyl ester (CA INDEX NAME)

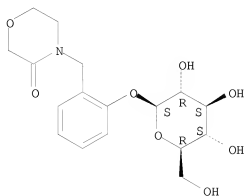
Absolute stereochemistry.



RN 889870-31-9 CAPLUS

CN 3-Morpholinone, 4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

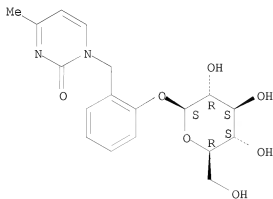
Absolute stereochemistry.



RN 889870-33-1 CAPLUS

CN 2(1H)-Pyrimidinone, 1-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]-4-methyl- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS



RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:404928 CAPLUS

DOCUMENT NUMBER: 145:181993

TITLE: Effect of benzophenones from Hypericum annulatum on carbon tetrachloride-induced toxicity in freshly isolated rat hepatocytes

AUTHOR(S): Mitcheva, Mitka; Kondeva, Magdalena; Vitcheva, Vessela; Nedialkov, Paraskev; Kitanov, Gerassim  
CORPORATE SOURCE: Departments of Pharmacology and Toxicology, Faculty of Pharmacy, Medical University - Sofia, Sofia, Bulg.

SOURCE: Redox Report (2006), 11(1), 3-8  
CODEN: RDRPE4; ISSN: 1351-0002  
URL: <http://www.ingentaconnect.com/content/maney/rer/2006/00000011/00000001>

PUBLISHER: Maney Publishing

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

AB Five benzophenones and a xanthone, isolated from Hypericum annulatum Moris, were investigated for their protective effect against carbon tetrachloride toxicity in isolated rat hepatocytes. The benzophenones and the xanthone gentisein were administered alone (100  $\mu$ M) and in combination with CCl<sub>4</sub> (86  $\mu$ M). CCl<sub>4</sub> undergoes dehalogenation in the liver endoplasmic reticulum. This process leads to trichlormethyl radical ( $\cdot$ CCl<sub>3</sub>) formation, initiation of lipid peroxidn., and measurable toxic effects on the hepatocytes. The levels of thiobarbituric acid reactive substances (TBARS) were assayed as an index of lipid peroxidn. (LPO). Lactate dehydrogenase (LDH) leakage, cell viability and reduced glutathione (GSH) depletion were used as signs of cytotoxicity. CCl<sub>4</sub> significantly decreased hepatocyte viability, GSH level and increased TBARS level and LDH leakage as compared to the control. Our data indicate that 2,3',5',6-tetrahydroxy-4-methoxybenzophenone, 2-O- $\alpha$ -L-arabinofuranosyl-3',5',6-trihydroxy-4-methoxybenzophenone and 2-O- $\alpha$ -L-3'-acetyl-arabinofuranosyl-3',5',6-trihydroxy-4-methoxybenzophenone showed weaker toxic effects compared to CCl<sub>4</sub> and in combination showed statistically significant protection against the toxic agent.

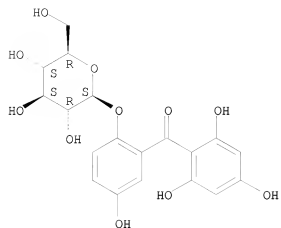
IT 366493-03-0, Hypericophenonoside

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(evaluation of protective effect of benzophenones from Hypericum annulatum on carbon tetrachloride-induced toxicity in freshly isolated rat hepatocytes)

RN 366493-03-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-5-hydroxyphenyl](2,4,6-trihydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT:

16

THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:75261 CAPLUS

DOCUMENT NUMBER: 144:121859

TITLE: Progression inhibitor for disease attributed to abnormal accumulation of liver fat

INVENTOR(S): Katsuno, Kenji; Fujimori, Yoshikazu; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006009149	A1	20060126	WO 2005-JP13262	20050719
<p>W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW</p> <p>RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM</p>				
CA 2572793	A1	20060126	CA 2005-2572793	20050719
EP 1782828	A1	20070509	EP 2005-762058	20050719
<p>R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR</p>				
US 20080045466	A1	20080221	US 2007-572251	20070117
MX 200700811	A	20070402	MX 2007-811	20070119
<p>PRIORITY APPLN. INFO.: JP 2004-213675 A 20040721 WO 2005-JP13262 W 20050719</p>				

AB A pharmaceutical composition that is effective as a progression inhibitor for diseases attributed to the abnormal accumulation of liver fat. In particular, there is provided a pharmaceutical composition characterized by containing a sodium/glucose cotransporter 2 inhibitor as an active ingredient. This pharmaceutical composition because of capability of inhibiting any abnormal accumulation of fat in the liver is highly suitable for use as a progression inhibitor for not only general fatty liver but also non-alc. fatty liver (NAFL), non-alc. steatohepatitis (NASH), hyperalimentation-induced fatty liver, diabetic fatty liver, alc.-induced fatty liver or toxic fatty liver.

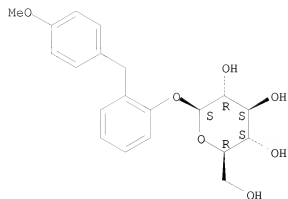
IT 360775-96-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sodium/glucose cotransporter 2 inhibitors for disease attributed to abnormal accumulation of liver fat)

RN 360775-96-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

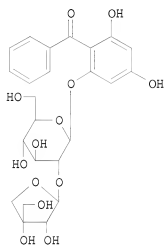


REFERENCE COUNT:

8

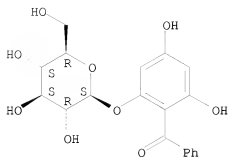
THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:1279967 CAPLUS  
 DOCUMENT NUMBER: 144:103963  
 TITLE: Xanthone O-Glycosides and Benzophenone O-Glycosides  
 from the Roots of *Polygala tricornis*  
 AUTHOR(S): Li, Jun; Jiang, Yong; Tu, Peng-Fei  
 CORPORATE SOURCE: Department of Natural Medicines, School of  
 Pharmaceutical Sciences, Peking University Health  
 Science Center, Beijing, 100083, Peop. Rep. China  
 SOURCE: Journal of Natural Products (2005), 68(12), 1802-1804  
 CODEN: JNPRDF; ISSN: 0163-3864  
 PUBLISHER: American Chemical Society-American Society of  
 Pharmacognosy  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB A new benzophenone O-glycoside, tricornoside A (I), and five new xanthone O-glycosides, tricornosides B-F, were isolated from the roots of *Polygala tricornis* together with three known glycosides. The structures of new compds. were elucidated on the basis of chemical and spectroscopic evidence.  
 IT RL: BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
 (xanthone and benzophenone glycosides from the roots of *Polygala tricornis*)  
 RN 356055-68-0 CAPLUS  
 CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl]phenyl-  
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT:

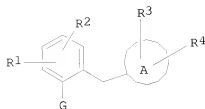
8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

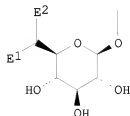
L4 ANSWER 19 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:1106864 CAPLUS  
 DOCUMENT NUMBER: 143:367528  
 TITLE: Preparation of glucopyranoside compounds containing  
 phenol moiety as SGLT inhibitors  
 INVENTOR(S): Fujikura, Hideki; Fushimi, Nobuhiko; Isaji, Masayuki  
 PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 74 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005095429	A1	20051013	WO 2005-JP6702	20050330
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2560005	A1	20051013	CA 2005-2560005	20050330
EP 1731524	A1	20061213	EP 2005-728907	20050330
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
US 20070185197	A1	20070809	US 2006-599444	20060928
PRIORITY APPLN. INFO.:			JP 2004-101893	A 20040331
			WO 2005-JP6702	W 20050330
OTHER SOURCE(S):	MARPAT 143:367528			
GI				





I



II

AB Title compds. I [R1, R2 = H, OH, amino, etc.; R3, R4 = H, OH, halo, etc.; ring A = aryl, heteroaryl; G = II; E1 = H, F; E2 = H, F, methyl] were prepared For example, substitution of 2-(4-methoxybenzyl)phenyl 2,3,4-tribenzoyl- $\beta$ -D-glucopyranoside, e.g., prepared from 2-(4-methoxybenzyl)phenyl  $\beta$ -D-glucopyranoside in 2 steps, using DAST followed by debenzoylation with NaOMe afforded 2-(4-methoxybenzyl)phenyl 6-deoxy-6-fluoro- $\beta$ -D-glucopyranoside (III). In SGLT2 (sodium-dependent glucose transporter 2) inhibition assays, the IC50 value of compound III was 86 nM. Compds. I are claimed useful for the treatment of diabetes, obesity, etc.

IT 866476-44-0P

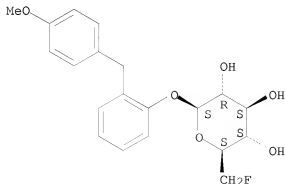
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of glucopyranoside compds. containing phenol moiety as SGLT inhibitors for treatment of diabetes, obesity, etc.)

RN 866476-44-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl 6-deoxy-6-fluoro- (CA INDEX NAME)

Absolute stereochemistry.



IT 360775-96-8

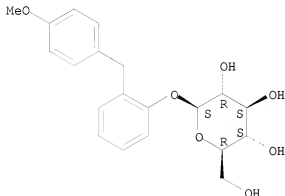
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of glucopyranoside compds. containing phenol moiety as SGLT inhibitors for treatment of diabetes, obesity, etc.)

RN 360775-96-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



IT 866476-37-1P

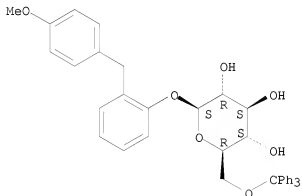
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of glucopyranoside compds. containing phenol moiety as SGLT inhibitors for treatment of diabetes, obesity, etc.)

RN 866476-37-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl 6-O-(triphenylmethyl)- (CA INDEX NAME)

Absolute stereochemistry.



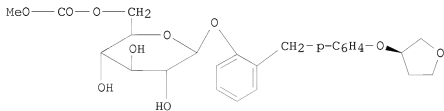
REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:612316 CAPLUS  
 DOCUMENT NUMBER: 143:115753  
 TITLE: Synthesis of glucopyranosyloxy-substituted  
 2-benzylphenyl derivatives and their use in treating  
 metabolic diseases  
 INVENTOR(S): Himmelsbach, Frank; Eickelmann, Peter; Barsoumian,  
 Edward Leon  
 PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany;  
 Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.  
 SOURCE: PCT Int. Appl., 55 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005063785	A2	20050714	WO 2004-EP14319	20041216
WO 2005063785	A3	20060413		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10361133	A1	20050721	DE 2003-10361133	20031222
CA 2548353	A1	20050714	CA 2004-2548353	20041216
EP 1699807	A2	20060913	EP 2004-803932	20041216
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU			
JP 2007515441	T	20070614	JP 2006-546000	20041216
US 20050187168	A1	20050825	US 2004-18870	20041221
US 7371732	B2	20080513		
PRIORITY APPLN. INFO.:			DE 2003-10361133	A 20031222
			US 2004-538560P	P 20040123
			WO 2004-EP14319	W 20041216
OTHER SOURCE(S):	MARPAT 143:115753			
GI				



I

AB The invention relates to glucopyranosyloxy-substituted aromates (e.g. (I)), their tautomers, stereoisomers, mixts. and salts, especially the physiol. compatible salts comprising inorg. or organic acids and having valuable

pharmacol. properties, especially an inhibiting effect on the sodium-dependent glucose cotransporter SGLT2, and their use in the treatment of diseases, especially metabolic diseases such as diabetes (no data). Thus, 2,3,4,6-tetra-O-acetyl- $\alpha$ -D-glucopyranosyl bromide was reacted with 2-[4-((R)-tetrahydrofuran-3-yloxy)benzyl]phenol (preparation given), deacetylated, and the resultant product reacted with Me chloroformate to give I. Formulations for administering the title compds. are given.

IT 857854-98-9P 857854-99-0P 857855-00-6P

857855-01-7P 857855-02-8P 857855-03-9P

857855-04-0P 857855-05-1P

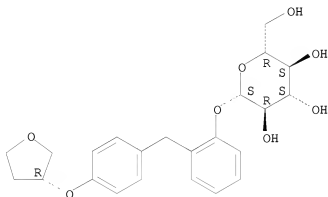
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of glucopyranosyloxy-substituted 2-benzylphenyl derivs. and their use in treating metabolic diseases)

RN 857854-98-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[(3R)-tetrahydro-3-furanyl]oxy]phenyl]methyl]phenyl (CA INDEX NAME)

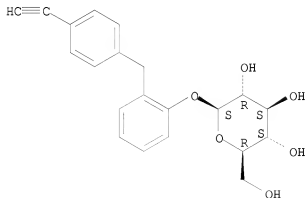
Absolute stereochemistry.



RN 857854-99-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(4-ethynylphenyl)methyl]phenyl] (CA INDEX NAME)

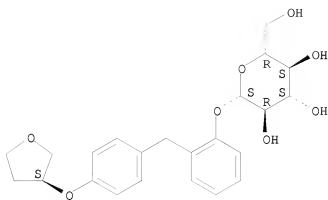
Absolute stereochemistry.



RN 857855-00-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[(3S)-tetrahydro-3-furanyl]oxy]phenyl]methyl]phenyl (CA INDEX NAME)

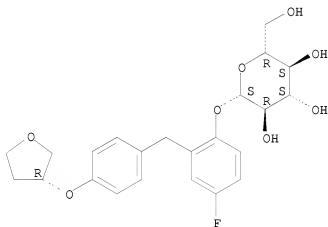
Absolute stereochemistry.



RN 857855-01-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4-fluoro-2-[[4-[[ (3R)-tetrahydro-3-furanyl]oxy]phenyl]methyl]phenyl (CA INDEX NAME)

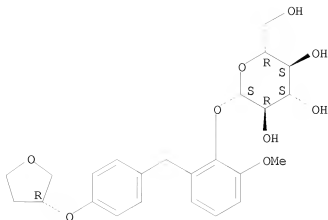
Absolute stereochemistry.



RN 857855-02-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-methoxy-6-[[4-[[ (3R)-tetrahydro-3-furanyl]oxy]phenyl]methyl]phenyl (CA INDEX NAME)

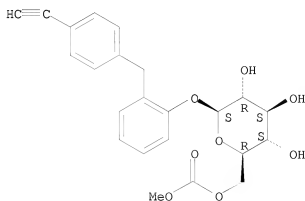
Absolute stereochemistry.



RN 857855-03-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethynylphenyl)methyl]phenyl, 6-(methyl carbonate) (9CI) (CA INDEX NAME)

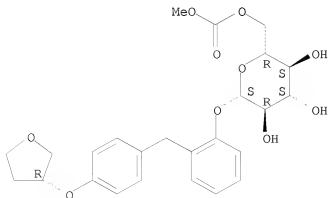
Absolute stereochemistry.



RN 857855-04-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[(3R)-tetrahydro-3-furanyl]oxy]phenyl]methyl]phenyl, 6-(methyl carbonate) (9CI) (CA INDEX NAME)

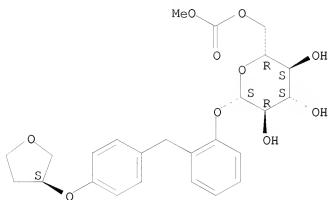
Absolute stereochemistry.



RN 857855-05-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[[ (3S)-tetrahydro-3-furanyl]oxy]phenyl]methyl]phenyl, 6-(methyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



ACCESSION NUMBER: 2005:18973 CAPLUS

DOCUMENT NUMBER: 143:112329

TITLE: Phytochemical study of flowers and latex of *Cryptostegia grandiflora* R.Br. cultivated in Egypt

AUTHOR(S): El Zalabani, S. M.; Abdel Sattar, E. A.; Fathy, F. I.; Shehab, N. G.

CORPORATE SOURCE: Pharmacognosy Department, Faculty of Pharmacy, Cairo University, Cairo, Egypt

SOURCE: Bulletin of the Faculty of Pharmacy (Cairo University) (2004), 42(2), 159-169

CODEN: BFPHA8; ISSN: 1110-0931

PUBLISHER: Cairo University, Faculty of Pharmacy

DOCUMENT TYPE: Journal

LANGUAGE: English

AB From the flowers of *Cryptostegia grandiflora* R.Br. two cardenolides oleandrigenin (1) and gitoxigenin (2), as well as, two flavonoid glycosides hyperoside (5) and astragalin (6), and their aglycons quercetin (4) and kaempferol (3) were isolated. While,  $\beta$ -amyrin (7), lupeol (8),  $\alpha$ -amyrin (9),  $\beta$ -sitosterol (10) and  $\beta$ -sitosterol-3-O- $\beta$ -D-glucoside (11), in addition to a phenolic glucoside 2,4,6-trihydroxy benzophenone-2-O- $\beta$ -D-glucopyranoside (12) were isolated from the latex of fresh unripe fruits. Characterization of the isolated compds. was achieved through phys., chemical, chromatog. and spectral analyses, as well as, by comparison with available authentic samples. All the aforementioned compds. except 1, 2 and 12 were, for the first time, isolated from the titled plant. The total flavonoid content of the flowers was colorimetrically determined and amounted to 3.25 %. In addition,

the lipoidal composition of the flowers and latex was qual. and quant. investigated using different chromatog. techniques (TLC and GLC).

IT 356055-68-0P

RL: BSU (Biological study, unclassified); PUR (Purification or recovery);

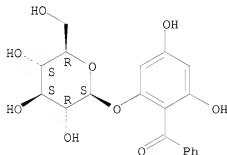
BIOL (Biological study); PREP (Preparation)

(phytochem. study of flowers and latex of *Cryptostegia grandiflora*)

RN 356055-68-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl]phenyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



ACCESSION NUMBER: 2004:996496 CAPLUS

DOCUMENT NUMBER: 143:97543

TITLE: Synthesis and biological evaluation of the

N-acyl-N'-solanesylpiperazine derivatives

Wang, Chao-Jie; Song, Jin-Yong; Zhao, Jin

CORPORATE SOURCE: College of Chemistry and Chemical Engineering, Henan

University, Kaifeng, 475001, Peop. Rep. China

SOURCE: Youji Huaxue (2004), 24(11), 1444-1447

CODEN: YCHHDX; ISSN: 0253-2786

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

OTHER SOURCE(S): CASREACT 143:97543

AB Using solanesol as the starting material and N-solanesylpiperazine as the key intermediate, several N-acyl-N'-solanesylpiperazine derivs. and two similar compds. containing glucosyl fragments were synthesized. N-(2-acetylglucosylbenzoyl)-N'-solanesylpiperazine and N-(2-glucosylbenzyl)-N'-solanesylpiperazine were designed and synthesized to evaluate their biol. activity. The structures of these compds. were confirmed by IR, <sup>1</sup>H NMR, MS spectra and elemental anal. The products were tested in vitro for their anti-tumor activity on KB, Bel-7402 and Hct-8 cells. The preliminary biol. studies showed that N-(2-glucosylbenzyl)-N'-solanesylpiperazine had better inhibition effect than the rest of products on the three cell lines.

IT 856661-17-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(synthesis and biol. activity of solanesylpiperazine derivs.)

RN 856661-17-1 CAPLUS

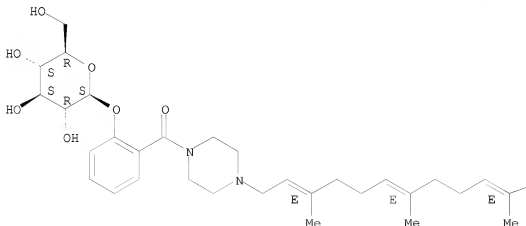
CN Piperazine, 1-[2-(β-D-glucopyranosyloxy)benzoyl]-4-

[(2E,6E,10E,14E,18E,22E,26E,30E)-3,7,11,15,19,23,27,31,35-nonamethyl-2,6,10,14,18,22,26,30,34-hexatriacontanonaenyl]- (9CI) (CA INDEX NAME)

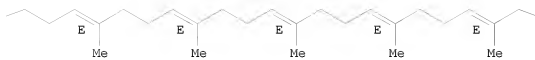
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



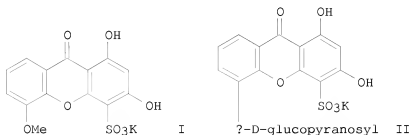
PAGE 1-B



PAGE 1-C



L4 ANSWER 23 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:788803 CAPLUS  
 DOCUMENT NUMBER: 142:3470  
 TITLE: Sulfonated xanthenes from *Hypericum sampsonii*  
 AUTHOR(S): Hong, Di; Yin, Feng; Hu, Li-Hong; Lu, Ping  
 CORPORATE SOURCE: Department of Chemistry, Zhejiang University,  
 Hangzhou, 310027, Peop. Rep. China  
 SOURCE: Phytochemistry (Elsevier) (2004), 65(18), 2595-2598  
 CODEN: PYTCAS; ISSN: 0031-9422  
 PUBLISHER: Elsevier B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



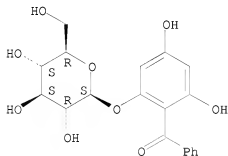
AB Xanthenes, 1,3-dihydroxy-5-methoxyxanthone-4-sulfonate(I) and 1,3-dihydroxy-5-O- $\beta$ -D-glucopyranosylxanthone-4-sulfonate (II), together with nine known compds. were obtained from *H. sampsonii*. This is the first report of sulfonated xanthonoids. Furthermore, compds. 1 and 2 exhibited significant cytotoxicity against the P388 cancer cell line.

IT 356055-68-0P  
 RL: BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
 (sulfonated xanthenes from *Hypericum sampsonii*)

RN 356055-68-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl]phenyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 24 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:568609 CAPLUS

DOCUMENT NUMBER: 141:117169

TITLE: Human SGLT1 inhibitors containing benzylphenyl glucopyranoside or galactopyranoside derivatives

INVENTOR(S): Yonekubo, Shigeru; Shimizu, Kazuo; Shibazaki, Toshihide; Tomae, Masaki; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 90 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

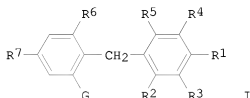
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004196788	A	20040715	JP 2003-404247	20031203
PRIORITY APPLN. INFO.:			JP 2002-352251	A 20021204
OTHER SOURCE(S):	MARPAT 141:117169			

GI



AB The invention provides human glucose-sodium cotransporter (SGLT1) inhibitors containing benzylphenol derivative represented by the following general

formula I [R<sub>1</sub> = OH, C1-6 alkyl, C1-6 alkoxy, C1-6 alkylthio, hydroxy(C1-6 alkyl), etc.; R<sub>2</sub> = H, C1-6 alkyl, C1-6 alkoxy, phenoxy, phenylthio, phenylamino, halogen; R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> = H, C1-6 alkyl, C1-6 alkoxy, halogen; R<sub>6</sub> = H, C1-6 alkyl; R<sub>7</sub> = H, OH, amino, mono/di(C1-6 alkyl)amino, C1-6 alkyl, C1-6 alkoxy, hydroxy(C1-6 alkyl), carbamoyl(C1-6 alkyl); G = β-D-glucopyranosyl, β-D-galactopyranosyl] and pharmacol.

acceptable salts or prodrugs thereof. A compound 5-hydroxy-3-methyl-2-[4-[(E)-2-[2-(sulfamoylamino)ethylcarbamoyl]vinyl]benzyl]phenyl β-D-glucopyranoside was prepared, and tested for its effect on human SGLT1 activity in vitro, and on blood glucose level in rats.

IT 721969-15-9P 721969-16-0P 721969-17-1P  
721969-18-2P 721969-19-3P 721969-20-6P  
721969-21-7P 721969-22-8P 721969-24-0P  
721969-25-1P 721969-26-2P 721969-27-3P  
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721969-35-3P 721969-36-4P 721969-37-5P  
721969-38-6P

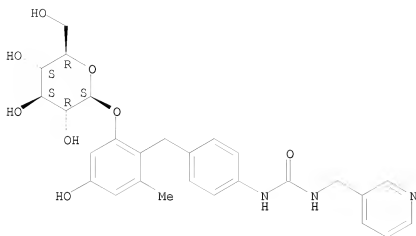
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(human SGLT1 inhibitors containing benzylphenyl glucopyranoside or galactopyranoside derivs.)

RN 721969-15-9 CAPLUS

CN Urea, N-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-N'-(3-pyridinylmethyl)- (9CI) (CA INDEX NAME)

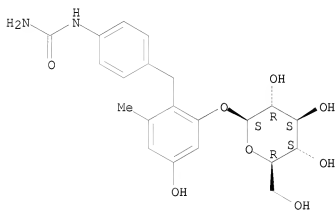
Absolute stereochemistry.



RN 721969-16-0 CAPLUS

CN Urea, [4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]- (9CI) (CA INDEX NAME)

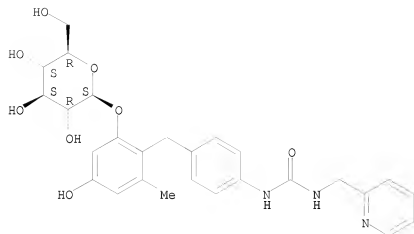
Absolute stereochemistry.



RN 721969-17-1 CAPLUS

CN Urea, N-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-N'-(2-pyridinylmethyl)- (9CI) (CA INDEX NAME)

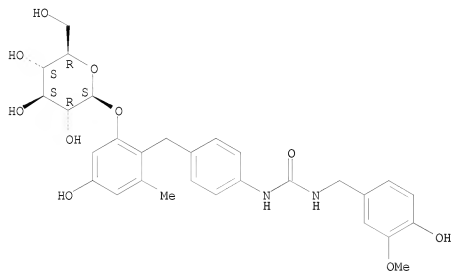
Absolute stereochemistry.



RN 721969-18-2 CAPLUS

CN Urea, N-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-N'-(4-hydroxy-3-methoxyphenyl)methyl- (9CI)  
(CA INDEX NAME)

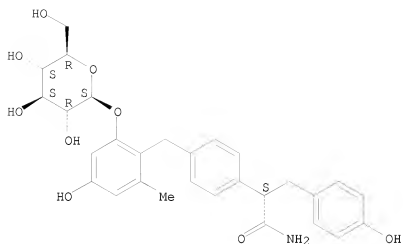
Absolute stereochemistry.



RN 721969-19-3 CAPLUS

CN Benzenepropanamide, α-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-4-hydroxy-, (αS)- (CA INDEX NAME)

Absolute stereochemistry.

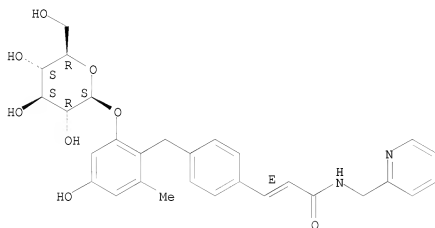


RN 721969-20-6 CAPLUS

CN 2-Propenamide, 3-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-N-(2-pyridinylmethyl)-, (2E)- (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

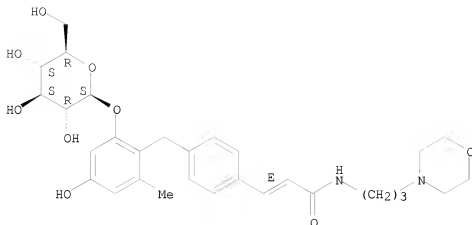


RN 721969-21-7 CAPLUS

CN 2-Propenamide, 3-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-N-[3-(4-morpholinyl)propyl]-, (2E)- (CA INDEX NAME)

Absolute stereochemistry.

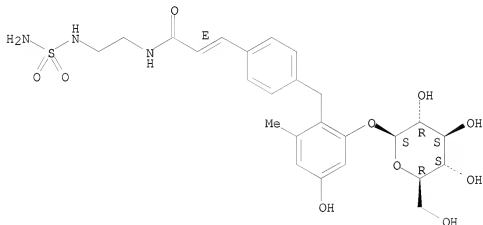
Double bond geometry as shown.



RN 721969-22-8 CAPLUS

CN 2-Propenamide, N-[2-[(aminosulfonyl)amino]ethyl]-3-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenyl]-, (2E)- (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

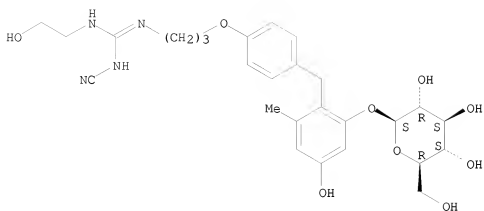


RN 721969-24-0 CAPLUS

CN Guanine, N-cyano-N'-[3-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]phenoxy]propyl]-N''-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

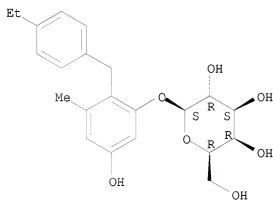




RN 721969-25-1 CAPLUS

CN  $\beta$ -D-Galactopyranoside, 2-[(4-ethylphenyl)methyl]-5-hydroxy-3-methylphenyl (CA INDEX NAME)

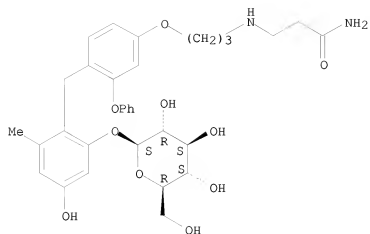
Absolute stereochemistry.



RN 721969-26-2 CAPLUS

CN Propanamide, 3-[[3-[[4-[( $\beta$ -D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-3-phenoxyphenoxy]propyl]amino]- (CA INDEX NAME)

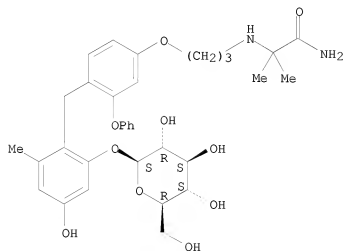
Absolute stereochemistry.



RN 721969-27-3 CAPLUS

CN Propanamide, 2-[[3-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-3-phenoxyphenoxy]propyl]amino]-2-methyl- (CA INDEX NAME)

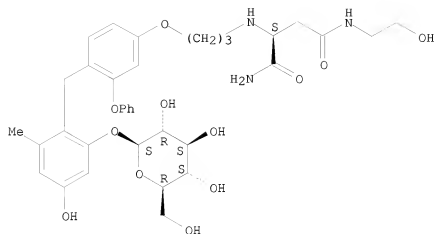
Absolute stereochemistry.



RN 721969-28-4 CAPLUS

CN Butanediamide, 2-[[3-[4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-3-phenoxyphenoxy]propyl]amino]-N4-(2-hydroxyethyl)-, (2S)- (CA INDEX NAME)

Absolute stereochemistry.

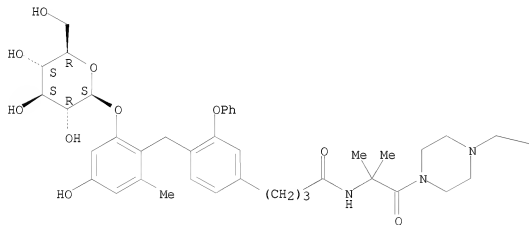


RN 721969-33-1 CAPLUS

CN Benzenebutanamide, 4-[[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-N-[2-[4-(2-hydroxyethyl)-1-piperazinyl]-1,1-dimethyl-2-oxoethyl]-3-phenoxy- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

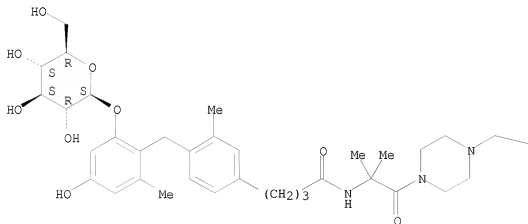


RN 721969-34-2 CAPLUS

CN Benzenebutanamide, 4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-N-[2-[4-(2-hydroxyethyl)-1-piperazinyl]-1,1-dimethyl-2-oxoethyl]-3-methyl- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

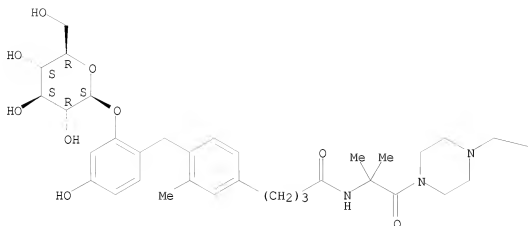


RN 721969-35-3 CAPLUS

CN Benzenebutanamide, 4-[[2-(β-D-glucopyranosyloxy)-4-hydroxyphenyl]methyl]-N-[2-[4-(2-hydroxyethyl)-1-piperazinyl]-1,1-dimethyl-2-oxoethyl]-3-methyl- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



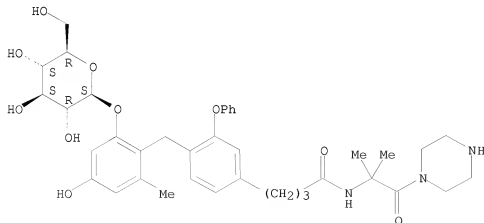
PAGE 1-B



RN 721969-36-4 CAPLUS

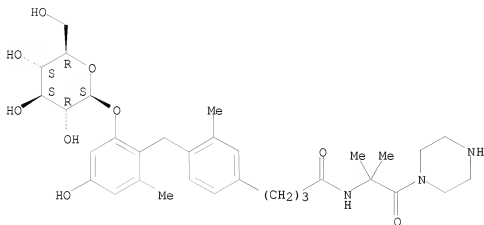
CN Benzenebutanamide, N-[1,1-dimethyl-2-oxo-2-(1-piperazinyl)ethyl]-4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-3-phenoxy-  
(CA INDEX NAME)

Absolute stereochemistry.



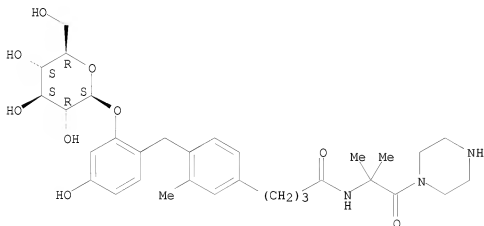
RN 721969-37-5 CAPLUS  
 CN Benzenebutanamide, N-[1,1-dimethyl-2-oxo-2-(1-piperazinyl)ethyl]-4-[[2-(β-D-glucopyranosyloxy)-4-hydroxy-6-methylphenyl]methyl]-3-methyl- (CA INDEX NAME)

Absolute stereochemistry.



RN 721969-38-6 CAPLUS  
 CN Benzenebutanamide, N-[1,1-dimethyl-2-oxo-2-(1-piperazinyl)ethyl]-4-[[2-(β-D-glucopyranosyloxy)-4-hydroxyphenyl]methyl]-3-methyl- (CA INDEX NAME)

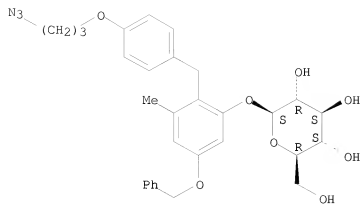
Absolute stereochemistry.



IT 721969-55-7P 721969-60-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of human SGLT1 inhibitors containing benzylphenyl glucopyranoside or galactopyranoside derivs.)

RN 721969-55-7 CAPLUS  
 CN β-D-Glucopyranoside, 2-[[4-(3-azidopropoxy)phenyl]methyl]-3-methyl-5-(phenylmethoxy)phenyl (CA INDEX NAME)

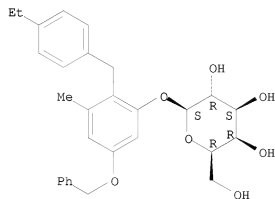
Absolute stereochemistry.



RN 721969-60-4 CAPLUS

CN  $\beta$ -D-Galactopyranoside, 2-[(4-ethylphenyl)methyl]-3-methyl-5-(phenylmethoxy)phenyl (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 25 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:110638 CAPLUS

DOCUMENT NUMBER: 140:395620

TITLE: Quantitative analysis of homeopathic mother tincture

of *Boerhaavia diffusa* Linn. by HPTLC employing the therapeutically active marker "punarnavoside"

AUTHOR(S): Lalla, Jogender; Hamrapurkar, Purnima; Kulkarni, Dhanashri; Mamania, Hemant

CORPORATE SOURCE: Mumbai, 400101, India

SOURCE: Journal of Planar Chromatography--Modern TLC (2003), 16(6), 465-468

CODEN: JPCTE5; ISSN: 0933-4173

PUBLISHER: Research Institute for Medicinal Plants

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Isolated punarnavoside was used as an active marker in a simple validated high-performance thin layer chromatog. (HPTLC) method for quant. estimation of the homeopathic mother tincture of *Boerhaavia diffusa* Linn. This HPTLC method for standardization of mother tincture of *B. diffusa* Linn. is a simple, rapid, cost-effective, and specific. Its sensitivity, as given by the limit of quantitation and linearity, was between 250 and 3000 mg, compared with 10-100 µg for a reported TLC-UV spectrophotometric method. The measurement of the concentration of punarnavoside, as a therapeutically active marker compound, can be used for quant. evaluation of the homeopathic content between 0.03 and 0.04%.

IT 106009-02-3, Punarnavoside

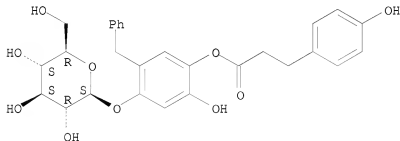
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(HPTLC for quant. anal. of punarnavoside in tincture of *Boerhaavia diffusa*)

RN 106009-02-3 CAPLUS

CN β-D-Glucopyranoside, 5-hydroxy-4-[3-(4-hydroxyphenyl)-1-oxopropoxy]-2-(phenylmethyl)phenyl (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L4 ANSWER 26 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:777816 CAPLUS

DOCUMENT NUMBER: 139:277114

TITLE: Crystals of glucopyranosyloxybenzyl benzene derivative

INVENTOR(S): Iyobe, Akira; Teranishi, Hirotaka; Tatani, Kazuya;

Yonekubo, Shigeru; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080635	A1	20031002	WO 2003-JP2466	20030304
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2476800	A1	20031002	CA 2003-2476800	20030304
AU 2003211543	A1	20031008	AU 2003-211543	20030304
EP 1489089	A1	20041222	EP 2003-744982	20030304
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003008653	A	20050215	BR 2003-8653	20030304
CN 1642965	A	20050720	CN 2003-806484	20030304
NZ 535230	A	20061027	NZ 2003-535230	20030304
IN 2004DN02694	A	20070302	IN 2004-DN2694	20040913
US 20050119192	A1	20050602	US 2004-507611	20040914
US 7371730	B2	20080513		
MX 2004PA09229	A	20041126	MX 2004-PA9229	20040922
NO 2004004426	A	20041222	NO 2004-4426	20041019
HK 1077830	A1	20070803	HK 2005-109901	20051107
PRIORITY APPLN. INFO.:			JP 2002-81038	A 20020322
			WO 2003-JP2466	W 20030304

AB It is intended to provide crystals of 2-(4-methoxybenzyl)phenyl 6-O-ethoxycarbonyl- $\beta$ -D-glucopyranoside, which exhibits an excellent SGLT2 inhibitory effect and is useful as a preventive or a remedy for diseases caused by hyperglycemia, medicinal compns. containing the same and use thereof. Thus, 2-(4-methoxybenzyl)phenyl 6-O-ethoxycarbonyl- $\beta$ -D-glucopyranoside  $\alpha$ -type crystal prepared by the reaction of 2-(4-methoxybenzyl)phenyl  $\beta$ -D-glucopyranoside and Et chloroformate followed by recrystn. in 2,6-lutidine, isopropanol and Me Et ketone gave shelf stability at 60° for 2 mo and showed inhibitive property for human SGL T2.

IT 360775-96-8P

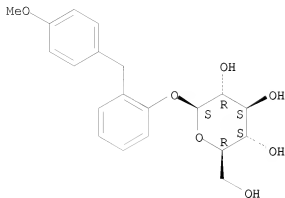
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in preparation of crystals of glucopyranosyloxybenzyl benzene derivative as inhibitor for human SGL T2)

RN 360775-96-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



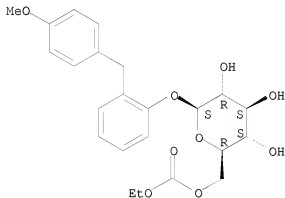
IT 408504-26-7P

RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)  
(preparation of crystals of glucopyranosyloxybenzyl benzene derivative as inhibitor for human SGL T2)

RN 408504-26-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-(ethyl carbonate) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

11

THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 27 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:701292 CAPLUS

DOCUMENT NUMBER: 140:213940

TITLE: Phenolic and aliphatic glucosides from *Cryptostegia grandiflora* and cardiotonic activity of cryptostigmin II

AUTHOR(S): Assaf, M. H.; Kamel, M. S.; Bishay, D. W.

CORPORATE SOURCE: Department of Pharmacognosy, Faculty of Pharmacy, Assiut University, Assiut, 71526, Egypt

SOURCE: Bulletin of Pharmaceutical Sciences, Assiut University (2003), 26(1), 41-48

CODEN: BPAUEC; ISSN: 1110-0052

PUBLISHER: Assiut University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB From the leaves of *Cryptostegia grandiflora*, 2 phenolic glucosides 2,4,6-trihydroxybenzophenone 2-O- $\beta$ -glucopyranoside and Acanthoside B together with a megastigmane (Icariside B1) and (Z)-3-hexenyl  $\beta$ -D glucopyranoside were isolated. Moreover the cardiotonic activities of *Cryptostegia* extract and Cryptostigmin II, the major cardenolide previously isolated from the same plant leaves were also investigated. The latter showed similar effects to those of Digoxin.

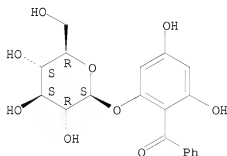
IT 356055-68-0

RL: BSU (Biological study, unclassified); BIOL (Biological study) (phenolic and aliphatic glucosides from *Cryptostegia grandiflora* and cardiotonic activity of cryptostigmin II)

RN 356055-68-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl]phenyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 28 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:188879 CAPLUS

DOCUMENT NUMBER: 139:66045

TITLE: Chemical constituents of Thai medicinal plant,  
Polyalthia cerasoides

AUTHOR(S): Kanchanapoom, Tripetch; Sommit, Jarunee; Kasai, Ryoji;  
Otsuka, Hideaki; Yamasaki, Kazuo

CORPORATE SOURCE: Department of Pharmaceutical Botany and Pharmacognosy,  
Faculty of Pharmaceutical Sciences, Khon Kaen  
University, Khon Kaen, 40002, Thailand

SOURCE: Natural Medicines (Tokyo, Japan) (2002), 56(6),  
268-271

CODEN: NMEDEQ; ISSN: 1340-3443

PUBLISHER: Japanese Society of Pharmacognosy

DOCUMENT TYPE: Journal

LANGUAGE: English

AB From the leaves and branches of Polyalthia cerasoides, two benzophenone  
glucosides (iriflophenone 2-O- $\beta$ -glucoside, iriflophenone  
3-C- $\beta$ -glucoside), a xanthone C-glucoside (mangiferin), and two  
flavonoid C- $\beta$ -glucosides (vitexin and isovitexin) were isolated. The  
structural elucidation were based on the analyses of spectroscopic  
methods. The  $^{13}\text{C}$  NMR spectral data of iriflophenone 2-O- $\beta$ -glucoside  
were corrected

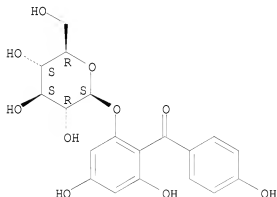
IT 245447-83-0P, Iriflophenone 2-O- $\beta$ -glucoside

RL: BSU (Biological study, unclassified); NPO (Natural product  
occurrence); PRP (Properties); PUR (Purification or recovery); BIOL  
(Biological study); OCCU (Occurrence); PREP (Preparation)  
(chemical constituents of Thai medicinal plant, Polyalthia cerasoides)

RN 245447-83-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl]-4-  
hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 29 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:117840 CAPLUS

DOCUMENT NUMBER: 138:153771

TITLE: Preparation of glucopyranosyloxybenzylbenzene derivatives as inhibitors of human SGLT2 (sodium-dependent glucose-transporter 2), medicinal composition containing the same, medicinal use thereof, and intermediate for production thereof

INVENTOR(S): Fushimi, Nobuhiko; Ito, Fumiaki; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 78 pp.

CODEN: PIXXD2

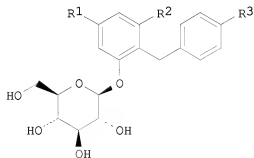
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011880	A1	20030213	WO 2002-JP7536	20020725
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002323942	A1	20030217	AU 2002-323942	20020725
PRIORITY APPLN. INFO.:			JP 2001-231804	A 20010731
			WO 2002-JP7536	W 20020725
OTHER SOURCE(S):	MARPAT 138:153771			
GI				



I

AB 2-Benzylphenyl  $\beta$ -D-glucopyranoside derivs. represented by the general formula (I) [wherein R1 = H, HO, NH<sub>2</sub>, mono- or di(lower alkyl)amino, cyano, carbamoyl, lower alkyl, lower alkoxy, hydroxy-lower alkyl, hydroxy-lower alkoxy, lower alkoxy-lower alkyl, lower alkoxy-lower alkoxy, carbamyl-lower alkyl, lower alkoxy-carbonyl-lower alkyl, lower alkoxy-carbonyl-lower alkoxy, carboxy-lower alkyl, carboxy-lower alkoxy, (un)substituted 5- or 6-membered alicyclic amino optionally containing one heteroatom selected from O, S, and N atoms in the ring besides the N atom attached to the bonding position, (un)substituted 5-membered aromatic cyclic

amino; R2 = H, lower alkyl; R3 = (un)substituted aryl or 3- to 7-membered cycloalkyl, (un)substituted 5- to 6-membered aliphatic heterocyclyl optionally containing 1 or 2 same or different heteroatoms selected from O, S, and N atoms in the ring, (un)substituted 5- or 6-membered aromatic heterocyclyl optionally containing 1-4 of same or different heteroatoms selected from O, S, and N atoms in the ring], pharmacol. acceptable salts of the derivs., or prodrugs thereof are prepared. These compds. have excellent human SGLT2 inhibitory activity and are useful as a preventive or remedy for diseases attributable to hyperglycemia, such as diabetes, complications of diabetes, obesity, hyperinsulinemia, glucose metabolism disorder, hyperlipidemia, hypercholesterolemia, hypertriglyceridemia, lipid metabolism disorder, atherosclerosis, hypertension, ischemic heart failure, edema, hyperuricemia, and gout. Thus, a mixture of 2-(4-pyrazol-1-ylbenzyl)phenol 0.10, 2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranoside 0.12 g, 5 mL CH<sub>2</sub>Cl<sub>2</sub>, and 0.32 mL 5 N aqueous NaOH solution was stirred at room temperature for 3 h to

give,  
after silica gel chromatog., 0.044 g 2-(4-pyrazol-1-ylbenzyl)phenyl  
2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranoside which (0.044 g) was  
stirred with NaOMe in MeOH at room temperature for 1 h to give, after silica

gel  
chromatog., 0.020 g 2-(4-pyrazol-1-ylbenzyl)phenyl  $\beta$ -D-  
glucopyranoside (II). II in vitro showed IC<sub>50</sub> of 0.1 nM for inhibiting  
the uptake of [<sup>14</sup>C]methyl  $\alpha$ -D-glucopyranoside in CHO-K1 cells  
transfected with human SGLT2 expression vector.

IT 363164-72-1P 496863-16-2P 496863-19-5P  
496863-22-0P

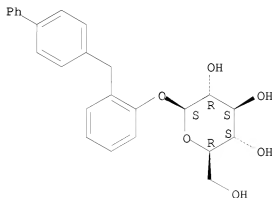
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(preparation of glucopyranosyloxybenzylbenzene derivs. as inhibitors of  
human human SGLT2 for prevention and treatment of diseases attributable  
to hyperglycemia)

RN 363164-72-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-([1,1'-biphenyl]-4-ylmethyl)phenyl (CA INDEX  
NAME)

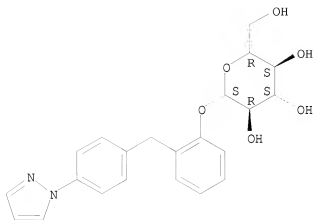
Absolute stereochemistry.



RN 496863-16-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-([4-(1H-pyrazol-1-yl)phenyl]methyl)phenyl (CA  
INDEX NAME)

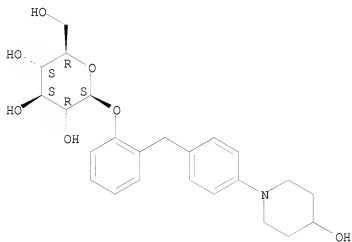
Absolute stereochemistry.



RN 496863-19-5 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(4-hydroxy-1-piperidinyl)phenyl]methyl]phenyl (CA INDEX NAME)

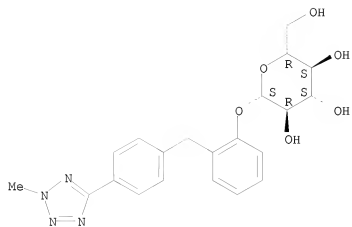
Absolute stereochemistry.



RN 496863-22-0 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(2-methyl-2H-tetrazol-5-yl)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

16

THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L4 ANSWER 30 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:637688 CAPLUS

DOCUMENT NUMBER: 137:185757

TITLE: Preparation of glucopyranosyloxybenzylbenzene derivatives as inhibitors of human SGLT2 (sodium-dependent glucose-transporter 2) activity and medicinal use thereof

INVENTOR(S): Fushimi, Nobuhiko; Tatani, Kazuya; Fujikura, Hideki; Nishimura, Toshihiro; Fujioka, Minoru; Nakabayashi, Takeshi; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 145 pp.

CODEN: PIXXD2

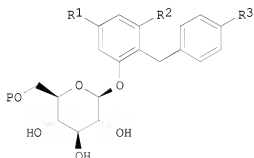
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002064606	A1	20020822	WO 2002-JP1178	20020213
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
TW 255817	B	20060601	TW 2002-91102376	20020208
CA 2437240	A1	20020822	CA 2002-2437240	20020213
AU 2002234871	A1	20020828	AU 2002-234871	20020213
EP 1367060	A1	20031203	EP 2002-701540	20020213
EP 1367060	B1	20051228		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
ES 2255603	T3	20060701	ES 2002-701540	20020213
US 20040138148	A1	20040715	US 2004-467823	20040113
PRIORITY APPLN. INFO.:			JP 2001-37729	A 20010214
			WO 2002-JP1178	W 20020213
OTHER SOURCE(S):	MARPAT 137:185757			
GI				



I

AB 2-Benzylphenyl  $\beta$ -D-glucopyranoside derivs. represented by the following formula (I) and pharmacol. acceptable salts thereof [wherein P = H, a group constituting a prodrug; R1 = H, NH2, mono- or

di(lower alkyl)amino, carbamoyl, lower alkyl, lower alkoxy, lower alkoxy-lower alkyl, lower alkoxy-lower alkoxy, carbamoyl-lower alkyl, carboxy-lower alkoxy, P1-O-A1- (wherein P1 = H, a group constituting a prodrug; A1 = a single bond, lower alkylene or alkyleneoxy); R2 = H, lower alkyl; R3 = lower alkyl, lower alkoxy, lower alkylthio, lower alkenyloxy, aralkyloxy, lower alkoxy-lower alkyl, lower alkoxy-lower alkoxy, lower alkoxy-lower alkylthio, CO2H, lower alkoxy-carbonyl, cyano, aralkyloxy-lower alkyl, cyano-lower alkyl, CONH2, carbamoyl-lower alkyl, NH2, mono- or di(lower alkyl)amino, lower alkoxy-carbonyl-lower alkyl, carboxy-lower alkoxy, P2-O-A2- (wherein P2 = H, a group constituting a prodrug; A2 = lower alkylene, lower alkyleneoxy, lower alkylene-thio, lower alkylene); some provisos are given] are prepared. These compounds are useful as preventives or remedies for diseases caused by hyperglycemia such as diabetes, diabetes complications, obesity, hyperinsulinism, glucose metabolism, hyperlipidemia, hypercholesterolemia, hypertriglyceridemia, abnormal lipid metabolism, atherosclerosis, hypertension, ischemic heart failure, edema, hyperuricemia, and gout because of having an improved oral absorbability and exerting an excellent human SGLT2 activity inhibitory effect (in vivo). Thus, 0.037 mL Et chloroformate was added to a solution of 0.075 g 2-(4-ethylbenzyl)-5-hydroxymethylphenyl  $\beta$ -D-glucopyranoside in 2 mL 2,4,6-trimethylpyridine and stirred at room temperature for 17 h to

give

43%

IT

0.020 g 2-(4-ethylbenzyl)-5-hydroxymethylphenyl 6-O-ethoxycarbonyl- $\beta$ -D-glucopyranoside (II). Oral bioavailability (serum concentration) of II was of that of i.v. administration in SD rats. II increased the excretion of glucose in urine from 7.0 mg/24 h/200 g body weight at 1 mg/kg body weight to 195 mg/24 h/200 g body weight at 10 mg/kg body weight when fed p.o. to SD rats.

360776-02-9P 360776-03-0P 360776-05-2P  
360776-06-3P 433331-02-3P 433331-12-5P  
433331-13-6P 433331-14-7P 433331-20-5P  
449146-45-6P 449146-75-2P 449146-76-3P  
449146-77-4P 449146-78-5P

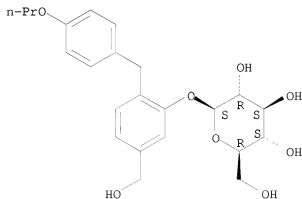
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of glucopyranosyloxybenzylbenzene derivs. as inhibitors of human SGLT2 activity for prevention or treatment of diseases caused by hyperglycemia)

RN 360776-02-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-(hydroxymethyl)-2-[(4-propoxyphenyl)methyl]phenyl (CA INDEX NAME)

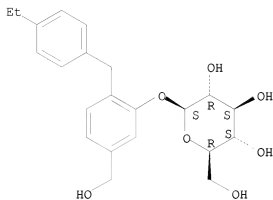
Absolute stereochemistry.



RN 360776-03-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl (CA INDEX NAME)

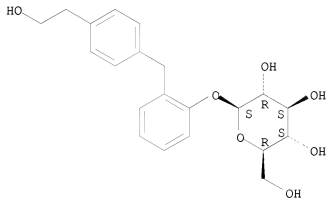
Absolute stereochemistry.



RN 360776-05-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]phenyl (CA INDEX NAME)

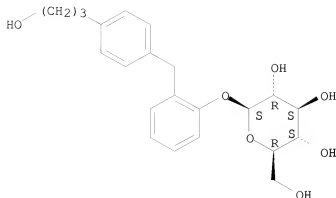
Absolute stereochemistry.



RN 360776-06-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(3-hydroxypropyl)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

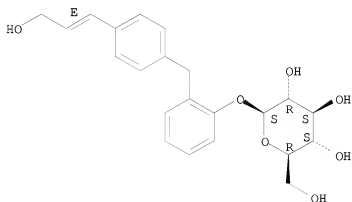


RN 433331-02-3 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-[(1E)-3-hydroxy-1-propen-1-yl]phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

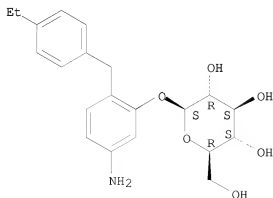
Double bond geometry as shown.



RN 433331-12-5 CAPLUS

CN β-D-Glucopyranoside, 5-amino-2-[(4-ethylphenyl)methyl]phenyl (CA INDEX NAME)

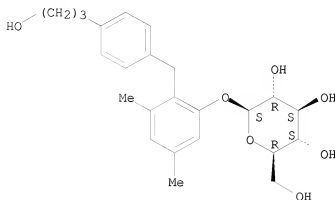
Absolute stereochemistry.



RN 433331-13-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(3-hydroxypropyl)phenyl]methyl]-3,5-dimethylphenyl (CA INDEX NAME)

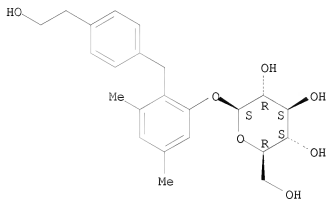
Absolute stereochemistry.



RN 433331-14-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-3,5-dimethylphenyl (CA INDEX NAME)

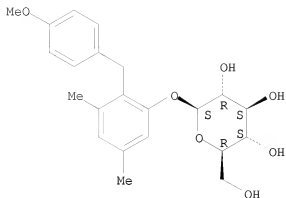
Absolute stereochemistry.



RN 433331-20-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(4-methoxyphenyl)methyl]-3,5-dimethylphenyl (CA INDEX NAME)

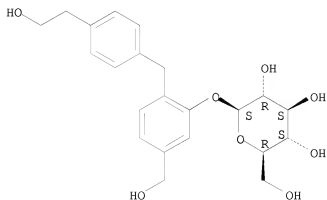
Absolute stereochemistry.



RN 449146-45-6 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-5-(hydroxymethyl)phenyl (CA INDEX NAME)

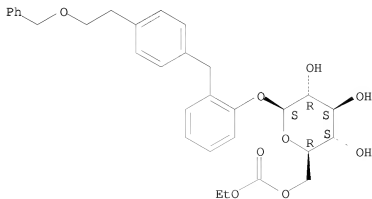
Absolute stereochemistry.



RN 449146-75-2 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-[2-(phenylmethoxy)ethyl]phenyl]methyl]phenyl, 6-(ethyl carbonate) (9CI) (CA INDEX NAME)

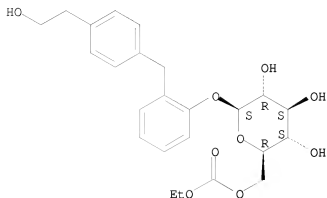
Absolute stereochemistry.



RN 449146-76-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]phenyl, 6-(ethyl carbonate) (9CI) (CA INDEX NAME)

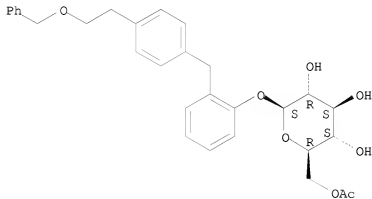
Absolute stereochemistry.



RN 449146-77-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[2-(phenylmethoxy)ethyl]phenyl]methyl]phenyl, 6-acetate (CA INDEX NAME)

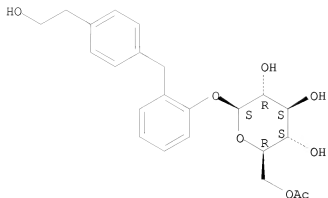
Absolute stereochemistry.



RN 449146-78-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]phenyl, 6-acetate (CA INDEX NAME)

Absolute stereochemistry.



IT 449146-66-1P 449146-67-2P 449146-68-3P  
 449146-69-4P 449146-70-7P 449146-71-8P  
 449146-72-9P 449146-73-0P 449146-74-1P  
 449146-79-6P

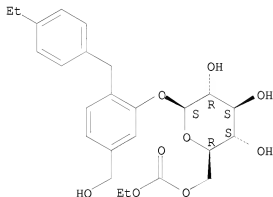
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(preparation of glucopyranosyloxybenzylbenzene derivs. as inhibitors of  
 human SGLT2 activity for prevention or treatment of diseases caused by  
 hyperglycemia)

RN 449146-66-1 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-  
 (hydroxymethyl)phenyl, 6-(ethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

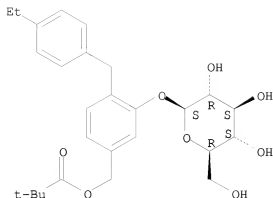


RN 449146-67-2 CAPLUS

CN β-D-Glucopyranoside, 5-[(2,2-dimethyl-1-oxopropoxy)methyl]-2-[(4-  
 ethylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

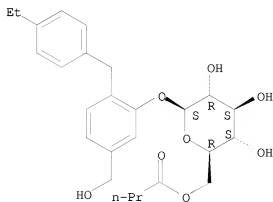




RN 449146-68-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl, 6-butanoate (CA INDEX NAME)

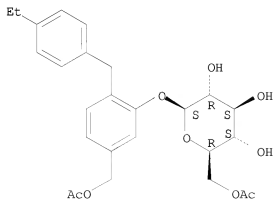
Absolute stereochemistry.



RN 449146-69-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-[(acetyloxy)methyl]-2-[(4-ethylphenyl)methyl]phenyl, 6-acetate (CA INDEX NAME)

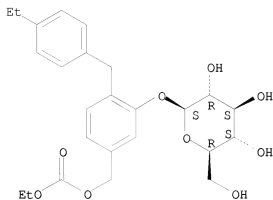
Absolute stereochemistry.



RN 449146-70-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-[[[(ethoxycarbonyl)oxy]methyl]-2-[(4-ethylphenyl)methyl]phenyl] (CA INDEX NAME)

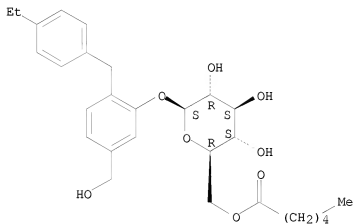
Absolute stereochemistry.



RN 449146-71-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl, 6-hexanoate (CA INDEX NAME)

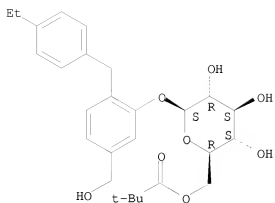
Absolute stereochemistry.



RN 449146-72-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl, 6-(2,2-dimethylpropanoate) (CA INDEX NAME)

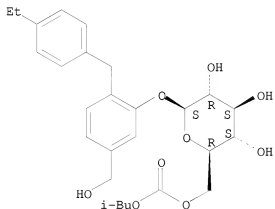
Absolute stereochemistry.



RN 449146-73-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl, 6-(2-methylpropyl carbonate) (9CI) (CA INDEX NAME)

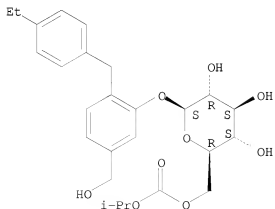
Absolute stereochemistry.



RN 449146-74-1 CAPLUS

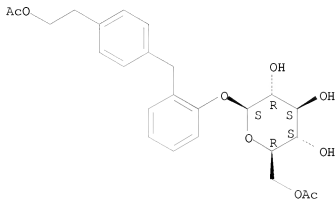
CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl, 6-(1-methylethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 449146-79-6 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-[[4-[2-(acetyloxy)ethyl]phenyl]methyl]phenyl, 6-acetate (CA INDEX NAME)

Absolute stereochemistry.

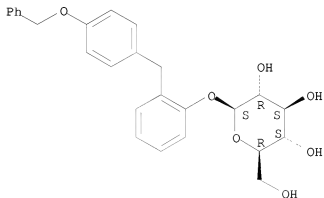


IT 363164-73-2P 433331-03-4P 433331-04-5P  
 433331-05-6P 433331-06-7P 433331-07-8P  
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 433331-15-8P 433331-16-9P 433331-17-0P  
 433331-18-1P 433331-19-2P 433331-21-6P  
 433331-22-7P 433331-23-8P 433331-24-9P  
 433331-25-0P 433331-33-0P 433331-99-8P  
 433332-00-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of glucopyranosyloxybenzylbenzene derivs. as inhibitors of human SGLT2 activity for prevention or treatment of diseases caused by hyperglycemia)

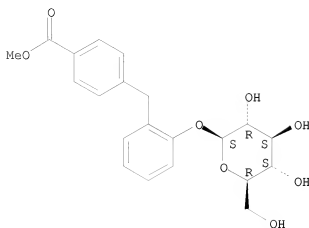
RN 363164-73-2 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-[[4-(phenylmethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



RN 433331-03-4 CAPLUS  
 CN Benzoic acid, 4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]-, methyl ester (CA INDEX NAME)

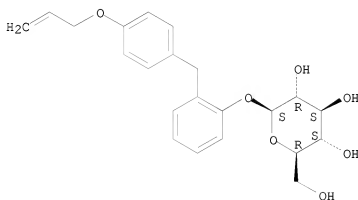
Absolute stereochemistry.



RN 433331-04-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-propen-1-yloxy)phenyl]methyl]phenyl  
(CA INDEX NAME)

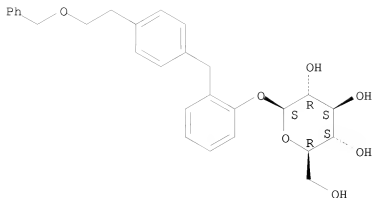
Absolute stereochemistry.



RN 433331-05-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[2-(phenylmethoxy)ethyl]phenyl]methyl]phenyl  
(CA INDEX NAME)

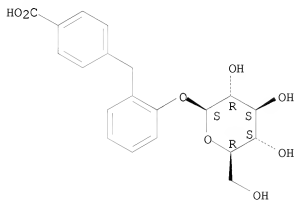
Absolute stereochemistry.



RN 433331-06-7 CAPLUS

CN Benzoic acid, 4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

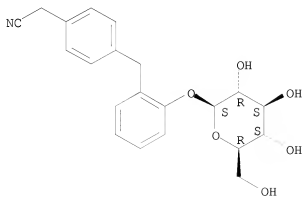
Absolute stereochemistry.



RN 433331-07-8 CAPLUS

CN Benzeneacetonitrile, 4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

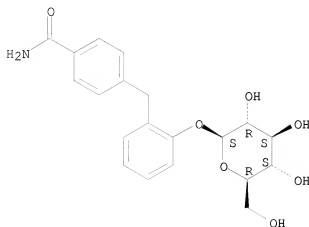
Absolute stereochemistry.



RN 433331-08-9 CAPLUS

CN Benamide, 4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

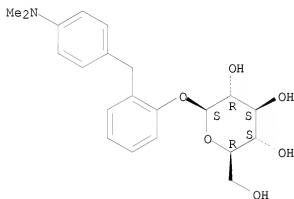
Absolute stereochemistry.



RN 433331-09-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(dimethylamino)phenyl]methyl]phenyl (CA INDEX NAME)

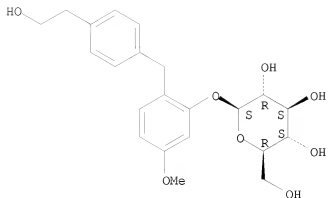
Absolute stereochemistry.



RN 433331-11-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-5-methoxyphenyl (CA INDEX NAME)

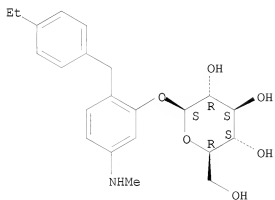
Absolute stereochemistry.



RN 433331-15-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(methylamino)phenyl  
(CA INDEX NAME)

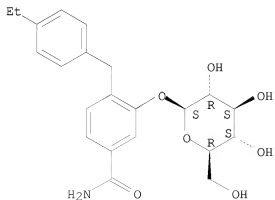
Absolute stereochemistry.



RN 433331-16-9 CAPLUS

CN Benzamide, 4-[(4-ethylphenyl)methyl]-3-( $\beta$ -D-glucopyranosyloxy)- (CA  
INDEX NAME)

Absolute stereochemistry.

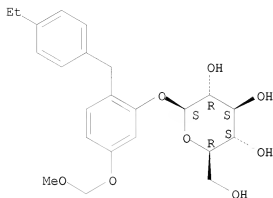


RN 433331-17-0 CAPLUS



CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(methoxymethoxy)phenyl (CA INDEX NAME)

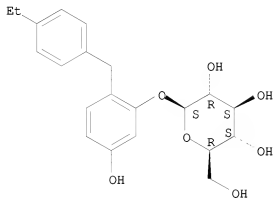
Absolute stereochemistry.



RN 433331-18-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-hydroxyphenyl (CA INDEX NAME)

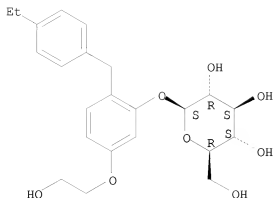
Absolute stereochemistry.



RN 433331-19-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(2-hydroxyethoxy)phenyl (CA INDEX NAME)

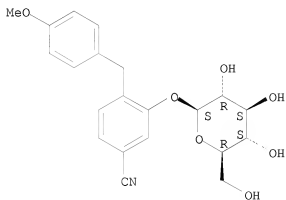
Absolute stereochemistry.



RN 433331-21-6 CAPLUS

CN Benzonitrile, 3-( $\beta$ -D-glucopyranosyloxy)-4-[(4-methoxyphenyl)methyl]-  
(CA INDEX NAME)

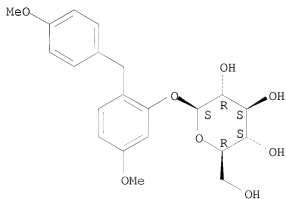
Absolute stereochemistry.



RN 433331-22-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-methoxy-2-[(4-methoxyphenyl)methyl]phenyl (CA  
INDEX NAME)

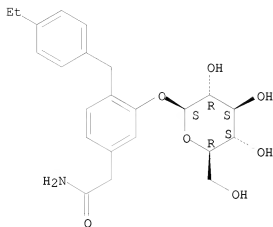
Absolute stereochemistry.



RN 433331-23-8 CAPLUS

CN Benzeneacetamide, 4-[(4-ethylphenyl)methyl]-3-( $\beta$ -D-glucopyranosyloxy)-  
(CA INDEX NAME)

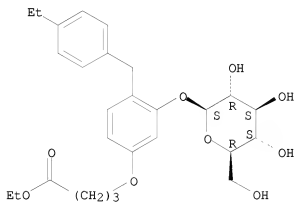
Absolute stereochemistry.



RN 433331-24-9 CAPLUS

CN Butanoic acid, 4-[4-[(4-ethylphenyl)methyl]-3-( $\beta$ -D-glucopyranosyloxy)phenoxy]-, ethyl ester (CA INDEX NAME)

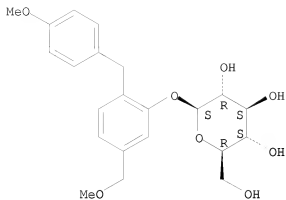
Absolute stereochemistry.



RN 433331-25-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-(methoxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

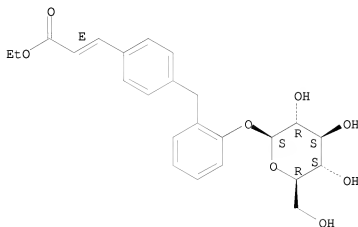


RN 433331-33-0 CAPLUS

CN 2-Propenoic acid, 3-[[4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]phenyl]ethyl]phenyl]-, ethyl ester, (2E)- (CA INDEX NAME)

Absolute stereochemistry.

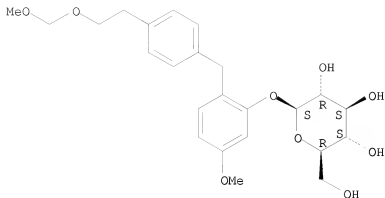
Double bond geometry as shown.



RN 433331-99-8 CAPLUS

CN β-D-Glucopyranoside, 5-methoxy-2-[[4-[2-(methoxymethoxy)ethyl]phenyl]methyl]phenyl (CA INDEX NAME)

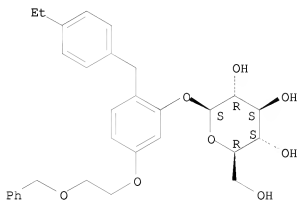
Absolute stereochemistry.



RN 433332-00-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-[2-(phenylmethoxy)ethoxy]phenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 31 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:428920 CAPLUS

DOCUMENT NUMBER: 137:6353

TITLE: Preparation of 2-(glucopyranosyloxy)benzylbenzene derivatives having activity for inhibiting human SGLT2 (sodium-dependent glucose-transporter 2), medicinal compositions containing the same, and intermediates in the production thereof

INVENTOR(S): Fujikura, Hideki; Nishimura, Toshihiro; Fushimi, Nobuhiko; Tatani, Kazuya; Kikuchi, Norihiko; Katsuno, Kenji; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

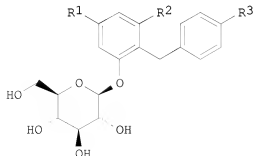
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002044192	A1	20020606	WO 2001-JP10115	20011120
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2429833	A1	20020606	CA 2001-2429833	20011120
AU 2002023127	A	20020611	AU 2002-23127	20011120
EP 1344780	A1	20030917	EP 2001-998555	20011120
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
TW 290556	B	20071201	TW 2001-90129522	20011129
US 20040063170	A1	20040401	US 2003-432905	20031006
US 7053060	B2	20060530		
US 20050059614	A1	20050317	US 2004-978413	20041102
US 7129381	B2	20061031		
US 20050113315	A1	20050526	US 2004-978331	20041102
PRIORITY APPLN. INFO.:			JP 2000-366192	A 20001130
			JP 2000-380482	A 20001214
			WO 2001-JP10115	W 20011120
			US 2003-432905	A3 20031006

OTHER SOURCE(S): MARPAT 137:6353

GI

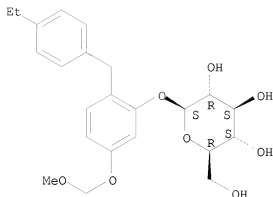


AB 2-Benzylphenyl  $\beta$ -D-glucopyranoside derivs. represented by the following general formula (I) and pharmacol. acceptable salts thereof [wherein R1 = H, HO, NH2, mono- or di(lower alkyl)amino, CONH2, lower alkyl, lower alkoxy, hydroxy-lower alkyl, hydroxy-lower alkoxy, lower alkoxy-lower alkyl, lower alkoxy-lower alkoxy, carbamoyl-lower alkyl, lower alkoxy-carbonyl-lower alkoxy, carboxy-lower alkyl, carboxy-lower alkoxy; R2 = H, lower alkyl; R3 = lower alkyl, lower alkoxy, lower alkylthio, hydroxy-lower alkyl, hydroxy-lower alkoxy, hydroxy-lower alkylthio, lower alkoxy-lower alkyl, lower alkoxy-lower alkoxy, lower alkoxy-lower alkylthio, lower alkenyloxy, aralkyloxy, hydroxy-lower alkenyl, CO2H, lower alkoxy-carbonyl, cyano, aralkyloxy-lower alkyl, cyano-lower alkyl, CONH2, carbamoyl-lower alkyl, NH2, mono- or di(lower alkyl)amino, lower alkoxy-carbonyl-lower alkyl, lower alkoxy-carbonyl-lower alkyl, lower alkoxy-carbonyl-lower alkoxy, carboxy-lower alkyl, carboxy-lower alkoxy; provided that when R1 is H or hydroxy-lower alkoxy and R2 is H, then R3 is not lower alkyl, lower alkoxy, lower alkylthio, hydroxy-lower alkyl, hydroxy-lower alkoxy, hydroxy-lower alkylthio, lower alkoxy-lower alkyl, lower alkoxy-lower alkoxy, or lower alkoxy-lower alkylthio] are prepared. Because of having a human SGLT2 activity inhibitory effect, these compds. inhibit reabsorption of sugar in kidney, promote the secretion of excess sugar into urine, and thereby exhibit excellent blood sugar-lowering activity and are useful as preventives or remedies for diseases caused by hyperglycemia such as diabetes, diabetic complications, and obesity. Thus, to a solution of 4.0 g 2-(4-methoxybenzyl)-3,5-dimethylphenol and 8.9 g 2,3,4,6-tetra-O-acetyl- $\alpha$ -D-glucopyranosyl trichloroacetimidate in 100 mL CH2Cl2 was added 2.5 mL BF3.OEt2 and stirred at room temperature for 1 h to give 7.8 g 2-(4-methoxybenzyl)-3,5-dimethylphenyl 2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranoside which (7.4 g) was suspended in 150 mL ethanol, treated with 65 mL 2 M aqueous NaOH, and stirred at room temperature for 2 h to give 5.2 g 2-(4-methoxybenzyl)-3,5-dimethylphenyl  $\beta$ -D-glucopyranoside (II). II and 5-amino-2-(4-ethylbenzyl)phenyl  $\beta$ -D-glucopyranoside in vitro inhibited the uptake of Me  $\alpha$ -D-glucopyranoside in COS-7 cells over-expressing human SGLT-2 with IC50 of 290 and 10 nM, resp. II increased the urinary secretion of glucose from 15 mg/24 h/200 g body weight at 0.1 mg/kg i.v to 288 mg/24 h/200 g body weight at 10 mg/kg in male SD rats.

IT 433331-17-0P 433331-18-1P  
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (preparation of (glucopyranosyloxy)benzylbenzene derivs. having activity for inhibiting human SGLT2 as preventives or remedies for diseases caused by hyperglycemia such as diabetes, diabetic complications, and obesity)

RN 433331-17-0 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(methoxymethoxy)phenyl (CA INDEX NAME)

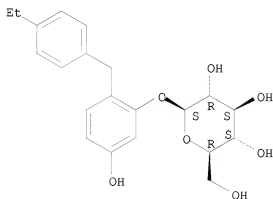
Absolute stereochemistry.



RN 433331-18-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(4-ethylphenyl)methyl]-5-hydroxyphenyl] (CA INDEX NAME)

Absolute stereochemistry.



IT 363164-73-2P 433331-02-3P 433331-03-4P

433331-04-5P 433331-05-6P 433331-06-7P

433331-07-8P 433331-08-9P 433331-09-0P

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433331-22-7P 433331-23-8P 433331-24-9P

433331-25-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

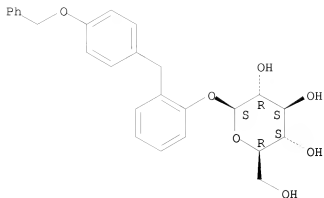
(preparation of (glucopyranosyloxy)benzylbenzene derivs. having activity for inhibiting human SGLT2 as preventives or remedies for diseases caused by hyperglycemia such as diabetes, diabetic complications, and obesity)

RN 363164-73-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(phenylmethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



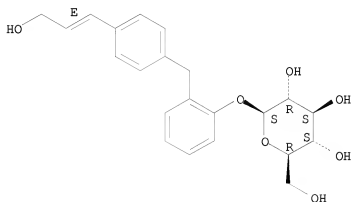


RN 433331-02-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[(1E)-3-hydroxy-1-propen-1-yl]phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

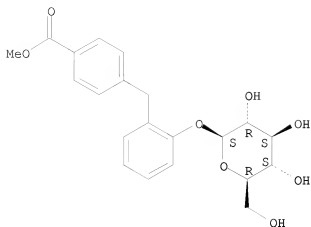
Double bond geometry as shown.



RN 433331-03-4 CAPLUS

CN Benzoic acid, 4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]-, methyl ester (CA INDEX NAME)

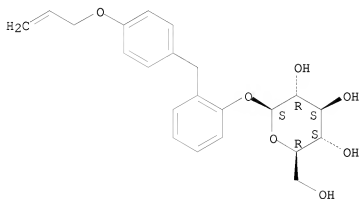
Absolute stereochemistry.



RN 433331-04-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-propen-1-yloxy)phenyl]methyl]phenyl  
(CA INDEX NAME)

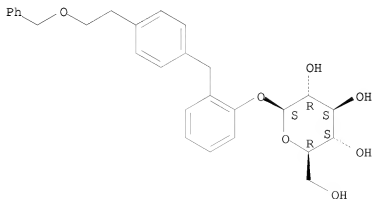
Absolute stereochemistry.



RN 433331-05-6 CAPLUS

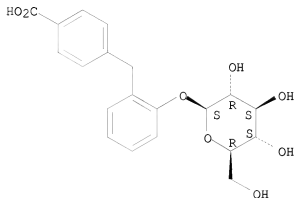
CN  $\beta$ -D-Glucopyranoside, 2-[[4-[2-(phenylmethoxy)ethyl]phenyl]methyl]phenyl  
(CA INDEX NAME)

Absolute stereochemistry.



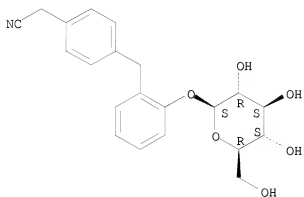
RN 433331-06-7 CAPLUS  
 CN Benzoic acid, 4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



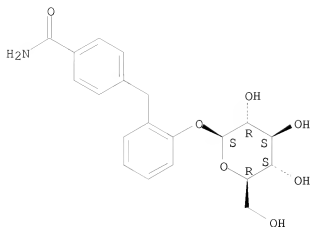
RN 433331-07-8 CAPLUS  
 CN Benzeneacetonitrile, 4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



RN 433331-08-9 CAPLUS  
 CN Benamide, 4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]- (CA INDEX NAME)

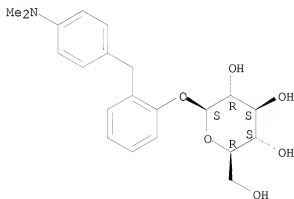
Absolute stereochemistry.



RN 433331-09-0 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(dimethylamino)phenyl]methyl]phenyl (CA INDEX NAME)

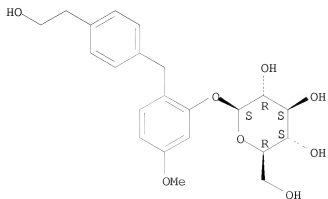
Absolute stereochemistry.



RN 433331-11-4 CAPLUS

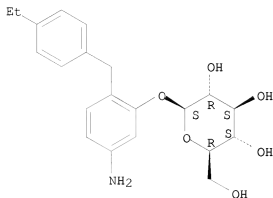
CN β-D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-5-methoxyphenyl (CA INDEX NAME)

Absolute stereochemistry.



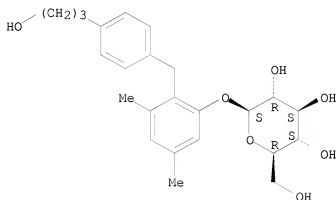
RN 433331-12-5 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 5-amino-2-[(4-ethylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



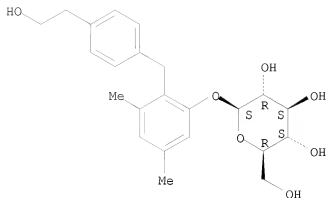
RN 433331-13-6 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-[[4-(3-hydroxypropyl)phenyl]methyl]-3,5-dimethylphenyl (CA INDEX NAME)

Absolute stereochemistry.



RN 433331-14-7 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]-3,5-dimethylphenyl (CA INDEX NAME)

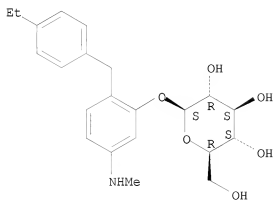
Absolute stereochemistry.



RN 433331-15-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(methylamino)phenyl  
(CA INDEX NAME)

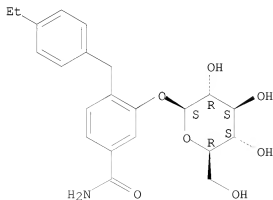
Absolute stereochemistry.



RN 433331-16-9 CAPLUS

CN Benzamide, 4-[(4-ethylphenyl)methyl]-3-( $\beta$ -D-glucopyranosyloxy)- (CA  
INDEX NAME)

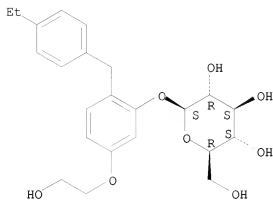
Absolute stereochemistry.



RN 433331-19-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(2-hydroxyethoxy)phenyl (CA INDEX NAME)

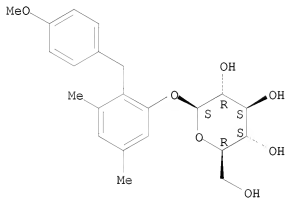
Absolute stereochemistry.



RN 433331-20-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-3,5-dimethylphenyl (CA INDEX NAME)

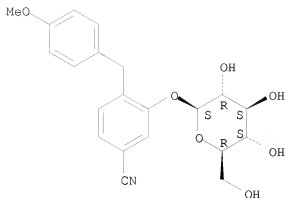
Absolute stereochemistry.



RN 433331-21-6 CAPLUS

CN Benzonitrile, 3-( $\beta$ -D-glucopyranosyloxy)-4-[(4-methoxyphenyl)methyl]- (CA INDEX NAME)

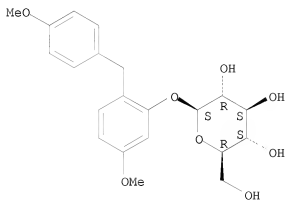
Absolute stereochemistry.



RN 433331-22-7 CAPLUS

CN β-D-Glucopyranoside, 5-methoxy-2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

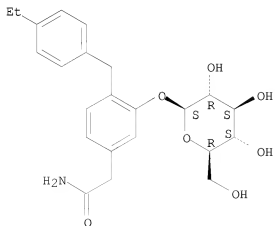
Absolute stereochemistry.



RN 433331-23-8 CAPLUS

CN Benzeneacetamide, 4-[(4-ethylphenyl)methyl]-3-(β-D-glucopyranosyloxy)- (CA INDEX NAME)

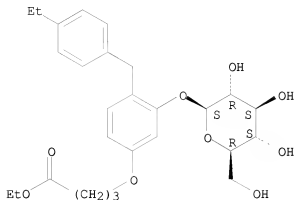
Absolute stereochemistry.





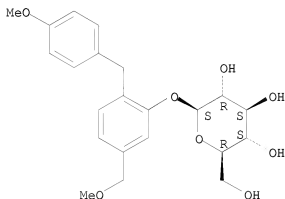
RN 433331-24-9 CAPLUS  
 CN Butanoic acid, 4-[4-[(4-ethylphenyl)methyl]-3-(β-D-glucopyranosyloxy)phenoxy]-, ethyl ester (CA INDEX NAME)

Absolute stereochemistry.



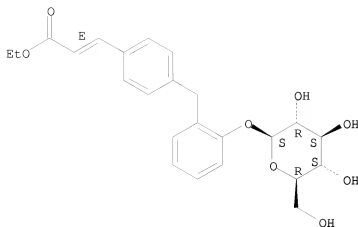
RN 433331-25-0 CAPLUS  
 CN β-D-Glucopyranoside, 5-(methoxymethyl)-2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



IT 433331-33-0P 433331-99-8P 433332-00-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of (glucopyranosyloxy)benzylbenzene derivs. having activity for inhibiting human SGLT2 as preventives or remedies for diseases caused by hyperglycemia such as diabetes, diabetic complications, and obesity)  
 RN 433331-33-0 CAPLUS  
 CN 2-Propenoic acid, 3-[4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]phenyl]-, ethyl ester, (2E)- (CA INDEX NAME)

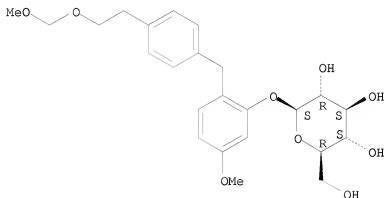
Absolute stereochemistry.  
 Double bond geometry as shown.



RN 433331-99-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-methoxy-2-[[4-[2-(methoxymethoxy)ethyl]phenyl]methyl]phenyl (CA INDEX NAME)

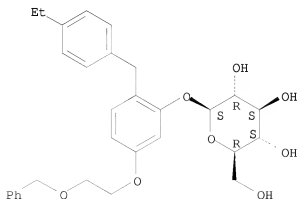
Absolute stereochemistry.



RN 433332-00-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-ethylphenyl]methyl]-5-[2-(phenylmethoxy)ethoxy]phenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

24

THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 32 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:390209 CAPLUS

DOCUMENT NUMBER: 137:206649

TITLE: Complete LC/MS analysis of a Tinneveli senna pod extract and subsequent isolation and identification of two new benzophenone glucosides

AUTHOR(S): Terreaux, Christian; Wang, Qi; Ioset, Jean-Robert; Ndjoko, Karine; Grimminger, Wolf; Hostettmann, Kurt  
CORPORATE SOURCE: Institut de Pharmacognosie et Phytochimie, Université de Lausanne, Lausanne, CH-1015, Switz.

SOURCE: Planta Medica (2002), 68(4), 349-354

CODEN: PLMEAA; ISSN: 0032-0943

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The hydroalcoholic extract of Tinneveli senna is widely used as a laxative phytomedicine. In order to improve the knowledge of the chemical composition

of this extract, LC/MS and LC/MSn studies were performed, allowing the online identification of most of the known constituents, i.e., flavonoids, anthraquinones and the typical dianthronic sennosides. However, the identity of four compds. could not be ascertained online under the given LC/MS conditions. These substances were isolated and their structures elucidated as kaempferol, the naphthalene derivative tinnevellin 8-glucoside and two new carboxylated benzophenone glucosides.

IT 452306-59-1 452306-60-4

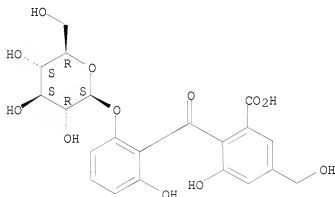
RL: ANT (Analyte); NPO (Natural product occurrence); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); RACT (Reactant or reagent)

(LC/MS anal. of Tinneveli senna pod extract with isolation and identification of two new benzophenone glucosides)

RN 452306-59-1 CAPLUS

CN Benzoic acid, 2-[2-( $\beta$ -D-glucopyranosyloxy)-6-hydroxybenzoyl]-3-hydroxy-5-(hydroxymethyl)- (CA INDEX NAME)

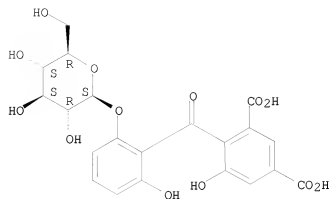
Absolute stereochemistry.



RN 452306-60-4 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 4-[2-( $\beta$ -D-glucopyranosyloxy)-6-hydroxybenzoyl]-5-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

10

THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 33 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:275999 CAPLUS

DOCUMENT NUMBER: 136:295018

TITLE: Preparation of glucopyranosyloxybenzylbenzene derivatives as inhibitors of human SGLT2 (sodium-dependent glucose-transporter 2) activity and medicinal compositions containing the same

INVENTOR(S): Fujikura, Hideki; Fushimi, Nobuhiko; Nishimura, Toshihiro; Tatani, Kazuya; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

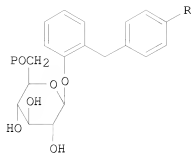
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028872	A1	20020411	WO 2001-JP8239	20010921
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2423568	A1	20020411	CA 2001-2423568	20010921
AU 2001090257	A	20020415	AU 2001-90257	20010921
AU 2001290257	A2	20020415	AU 2001-290257	20010921
AU 2001290257	B2	20070830		
EP 1329456	A1	20030723	EP 2001-970186	20010921
EP 1329456	B1	20060809		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001014310	A	20031014	BR 2001-14310	20010921
HU 2003001178	A2	20031128	HU 2003-1178	20010921
NZ 524917	A	20050128	NZ 2001-524917	20010921
JP 3798375	B2	20060719	JP 2002-532454	20010921
AT 335753	T	20060915	AT 2001-970186	20010921
ES 2269456	T3	20070401	ES 2001-970186	20010921
ZA 2003002283	A	20050527	ZA 2003-2283	20030324
BG 107674	A	20040130	BG 2003-107674	20030326
NO 2003001407	A	20030430	NO 2003-1407	20030327
MX 2003PA02779	A	20040504	MX 2003-PA2779	20030328
US 20040018998	A1	20040129	US 2003-381846	20030729
US 6872706	B2	20050329		
HK 1061037	A1	20070608	HK 2004-104109	20040609
US 20050065098	A1	20050324	US 2004-916548	20040812
TW 284641	B	20070801	TW 2001-90124049	20090105
PRIORITY APPLN. INFO.:			JP 2000-301523	A 20000929
			WO 2001-JP8239	W 20010921
			US 2003-381846	A1 20030729

OTHER SOURCE(S): MARPAT 136:295018

GI



I

AB Glucopyranosyloxybenzylbenzene derivs. represented by the following general formula (I; wherein P represents a group constituting a prodrug; and R represents lower alkyl, lower alkoxy, lower alkylthio, lower alkoxy lower alkyl, lower alkoxy lower alkoxy or lower alkoxy lower alkylthio) are prepared. These compds. have an improved oral absorbability, exert an excellent effect of inhibiting human SGLT2 activity in vivo and, therefore, are useful as preventives or remedies for diseases caused by hyperglycemia such as diabetes, complication of diabetes, and obesity. Thus, to a solution of 0.51 g 2-(4-ethylthiobenzyl) and 2.4 g 1,2,3,4,6-pent-O-acetyl- $\beta$ -D-glucopyranose in 2.7 mL CH<sub>2</sub>Cl<sub>2</sub> was added 0.78 mL BF<sub>3</sub>.Et<sub>2</sub>O and stirred at room temperature for 9 h, followed by treatment of the peracetylated glucoside with NaOMe/MeOH at 25° for 18 h, 0.51 g 2-(4-ethylthiobenzyl)phenyl  $\beta$ -D-glucopyranoside (II). II and 2-(4-methoxybenzyl)phenyl  $\beta$ -D-glucopyranoside (III) in vitro showed IC<sub>50</sub> of 110 and 350 nM, resp., for inhibiting the uptake of Me  $\alpha$ -D-glucopyranoside in COS-7 cells over-expressing human SGLT2. 6-O-acyl III derivs. were prepared and tested for oral absorbability and bioavailability. When administered p.o. or i.v. to rats, bioavailability of III and 2-(4-methoxybenzyl)phenyl 6-O-hexanoyl- $\beta$ -D-glucopyranoside was 15 and 61%, resp.

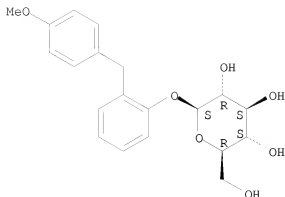
IT 360775-96-8P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of glucopyranosyloxybenzylbenzene derivs. as inhibitors of human SGLT2 activity for prevention or treatment of diseases caused by hyperglycemia)

RN 360775-96-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



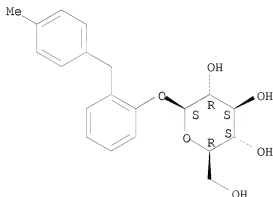
IT 360775-97-9P 360775-98-0P 360775-99-1P  
 360776-00-7P 360776-01-8P 360776-07-4P  
 408504-26-7P 408504-27-8P 408504-28-9P  
 408504-29-0P 408504-30-3P 408504-31-4P  
 408504-32-5P 408504-33-6P 408504-34-7P  
 408504-35-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (preparation of glucopyranosyloxybenzylbenzene derivs. as inhibitors of  
 human SGLT2 activity for prevention or treatment of diseases caused by  
 hyperglycemia)

RN 360775-97-9 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-methylphenyl)methyl]phenyl (CA INDEX  
 NAME)

Absolute stereochemistry.

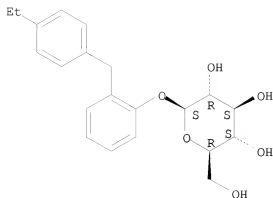


RN 360775-98-0 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

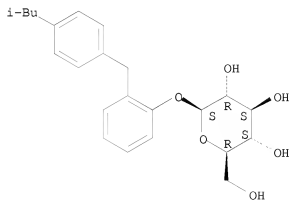




RN 360775-99-1 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(2-methylpropyl)phenyl]methyl]phenyl (CA INDEX NAME)

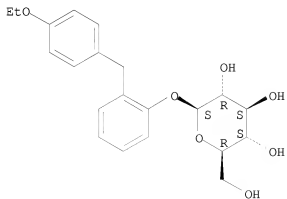
Absolute stereochemistry.



RN 360776-00-7 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(4-ethoxyphenyl)methyl]phenyl (CA INDEX NAME)

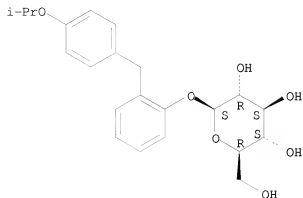
Absolute stereochemistry.



RN 360776-01-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(1-methylethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

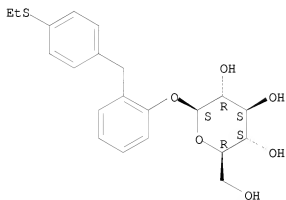
Absolute stereochemistry.



RN 360776-07-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(ethylthio)phenyl]methyl]phenyl (CA INDEX NAME)

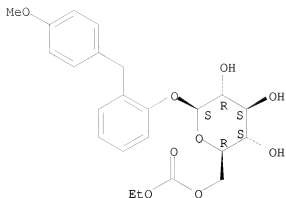
Absolute stereochemistry.



RN 408504-26-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(methoxyphenyl)methyl]phenyl, 6-(ethyl carbonate) (CA INDEX NAME)

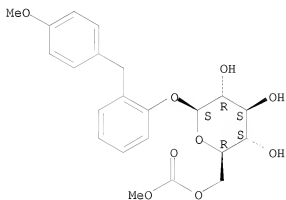
Absolute stereochemistry.



RN 408504-27-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-(methyl carbonate) (9CI) (CA INDEX NAME)

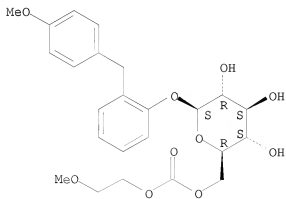
Absolute stereochemistry.



RN 408504-28-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-(2-methoxyethyl carbonate) (9CI) (CA INDEX NAME)

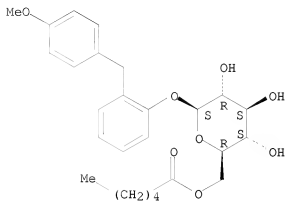
Absolute stereochemistry.



RN 408504-29-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-hexanoate  
(CA INDEX NAME)

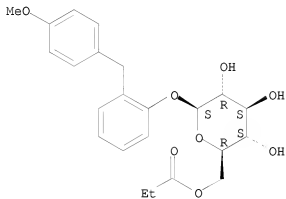
Absolute stereochemistry.



RN 408504-30-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-propanoate  
(CA INDEX NAME)

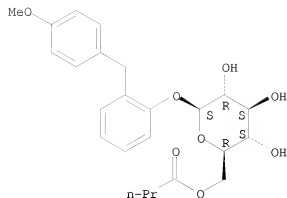
Absolute stereochemistry.



RN 408504-31-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-butanoate  
(CA INDEX NAME)

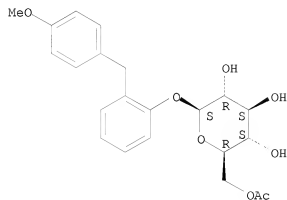
Absolute stereochemistry.



RN 408504-32-5 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-acetate  
(CA INDEX NAME)

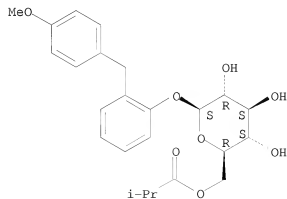
Absolute stereochemistry.



RN 408504-33-6 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl,  
6-(2-methylpropanoate) (CA INDEX NAME)

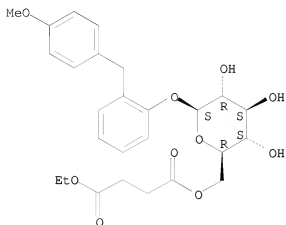
Absolute stereochemistry.



RN 408504-34-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-(ethyl butanedioate) (9CI) (CA INDEX NAME)

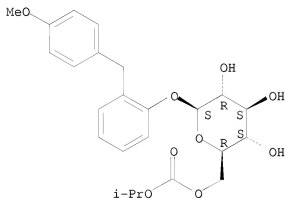
Absolute stereochemistry.



RN 408504-35-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl, 6-(1-methylethyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

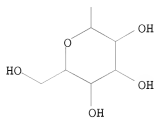
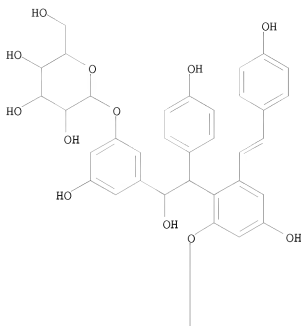


REFERENCE COUNT:

13

THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

CN  $\beta$ -D-Glucopyranoside, 3-[(1*E*)-2-[(4-hydroxyphenyl)ethenyl]phenyl]-1-hydroxy-2-(4-hydroxyphenyl)ethyl-5-hydroxyphenyl (9CI) (CA INDEX NAME)



REFERENCE COUNT:

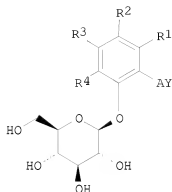
29

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L4 ANSWER 35 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:747805 CAPLUS  
 DOCUMENT NUMBER: 135:273163  
 TITLE: Preparation of O-aryl glucosides as antidiabetic agents and SGLT2 inhibitors  
 INVENTOR(S): Washburn, William N.; Sher, Philip M.; Wu, Gang  
 PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA  
 SOURCE: PCT Int. Appl., 78 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001074834	A1	20011011	WO 2001-US10092	20010329
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 20020111315	A1	20020815	US 2001-791512	20010223
US 6683056	B2	20040127		
CA 2404373	A1	20011011	CA 2001-2404373	20010329
EP 1268502	A1	20030102	EP 2001-922840	20010329
EP 1268502	B1	20060201		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
HU 2003001513	A2	20030929	HU 2003-1513	20010329
HU 2003001513	A3	20070529		
JP 2004500416	T	20040108	JP 2001-572523	20010329
BR 2001009326	A	20040330	BR 2001-9326	20010329
NZ 520822	A	20050324	NZ 2001-520822	20010329
RU 2269540	C2	20060210	RU 2002-126586	20010329
AT 316976	T	20060215	AT 2001-922840	20010329
ES 2258079	T3	20060816	ES 2001-922840	20010329
AU 2001249598	B2	20060907	AU 2001-249598	20010329
ZA 2002007030	A	20031202	ZA 2002-7030	20020902
IN 2002MN01246	A	20050304	IN 2002-MN1246	20020912
NO 2002004642	A	20021121	NO 2002-4642	20020927
MX 2002PA09522	A	20030514	MX 2002-PA9522	20020927
KR 798203	B1	20080124	KR 2002-712976	20020928
HK 1049168	A1	20060428	HK 2003-101354	20030221
PRIORITY APPLN. INFO.:			US 2000-193094P	P 20000330
			WO 2001-US10092	W 20010329
OTHER SOURCE(S):	MARPAT 135:273163			
GI				



I

AB O-aryl glucosides I wherein Y is heteroaryl; A is  $-\text{O}(\text{CH}_2)_m$ , S,  $-\text{NH}(\text{CH}_2)_m$ , or  $(\text{CH}_2)_n$  where n is 0-3 and m is 0-2; and R1-R4 are independently H, OH, alkoxy, alkyl, halogen, two of R1-R4 together with the carbons to which they are attached can form an annelated five, six, or seven membered carbocycle or heterocycle which may contain 1 to 4 heteroatoms, were prepared as antidiabetic agents and SGLT2 inhibitors. A method is also provided for treating diabetes and related diseases employing an SGLT2 inhibiting amount of the above compound alone or in combination with one, two or more other antidiabetic agents, and/or one, two or more hypolipidemic agents. Thus, I (R1-R4 = H, A =  $\text{CH}_2$ , Y = C<sub>6</sub>H<sub>5</sub>-Me-4) was prepared as antidiabetic and SGLT2 inhibitor (no data).

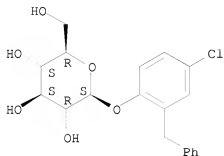
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 363165-55-3P 363165-56-4P 363165-57-5P  
 363165-58-6P 363165-59-7P 363165-60-0P  
 363165-61-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of O-aryl glucosides as antidiabetic agents and SGLT2 inhibitors)

RN 55325-19-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4-chloro-2-(phenylmethyl)phenyl (CA INDEX NAME)

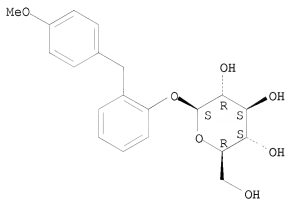
Absolute stereochemistry.



RN 360775-96-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

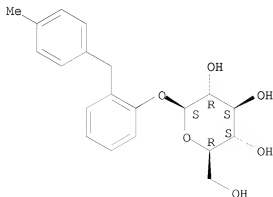
Absolute stereochemistry.



RN 360775-97-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-methylphenyl)methyl]phenyl (CA INDEX NAME)

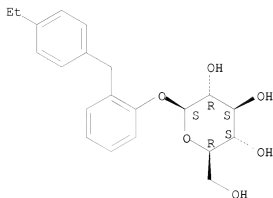
Absolute stereochemistry.



RN 360775-98-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]phenyl (CA INDEX NAME)

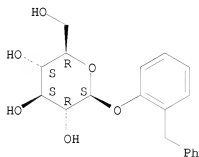
Absolute stereochemistry.



RN 363164-68-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(phenylmethyl)phenyl (CA INDEX NAME)

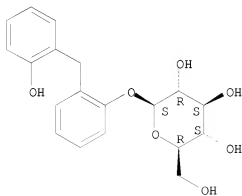
Absolute stereochemistry.



RN 363164-69-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(2-hydroxyphenyl)methyl]phenyl (CA INDEX NAME)

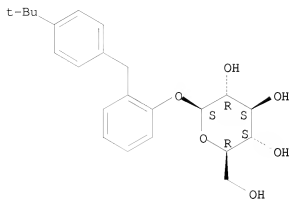
Absolute stereochemistry.



RN 363164-70-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(1,1-dimethylethyl)phenyl]methyl]phenyl  
(CA INDEX NAME)

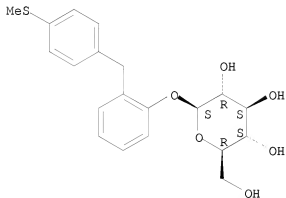
Absolute stereochemistry.



RN 363164-71-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(methylthio)phenyl]methyl]phenyl (CA  
INDEX NAME)

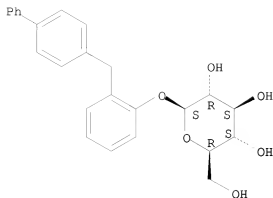
Absolute stereochemistry.



RN 363164-72-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-([1,1'-biphenyl]-4-ylmethyl)phenyl (CA INDEX  
NAME)

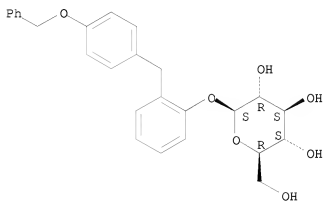
Absolute stereochemistry.



RN 363164-73-2 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(phenylmethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

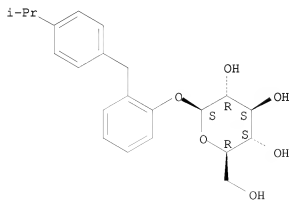
Absolute stereochemistry.



RN 363164-74-3 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(1-methylethyl)phenyl]methyl]phenyl (CA INDEX NAME)

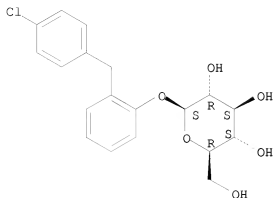
Absolute stereochemistry.



RN 363164-75-4 CAPLUS

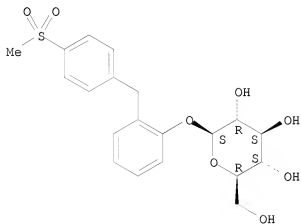
CN  $\beta$ -D-Glucopyranoside, 2-[(4-chlorophenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



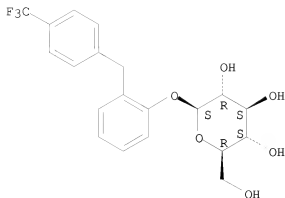
RN 363164-76-5 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[[4-(methylsulfonyl)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



RN 363164-77-6 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[[4-(trifluoromethyl)phenyl]methyl]phenyl (CA INDEX NAME)

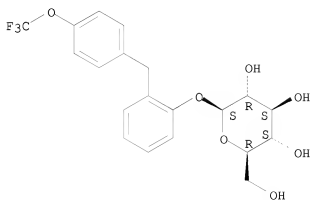
Absolute stereochemistry.



RN 363164-78-7 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(trifluoromethoxy)phenyl]methyl]phenyl  
(CA INDEX NAME)

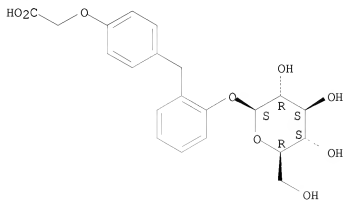
Absolute stereochemistry.



RN 363164-79-8 CAPLUS

CN Acetic acid, [4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]phenoxy]-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

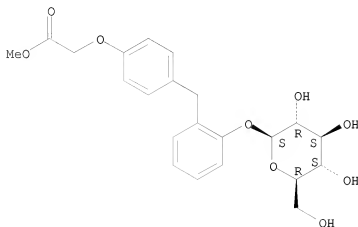


RN 363164-80-1 CAPLUS



CN Acetic acid, [4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]phenoxy]-, methyl ester (9CI) (CA INDEX NAME)

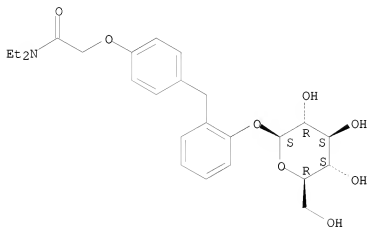
Absolute stereochemistry.



RN 363164-81-2 CAPLUS

CN Acetamide, N,N-diethyl-2-[4-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]phenoxy]- (CA INDEX NAME)

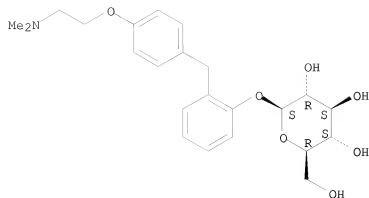
Absolute stereochemistry.



RN 363164-82-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-[2-(dimethylamino)ethoxy]phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

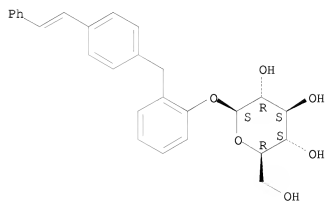


RN 363164-83-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-phenylethenyl)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

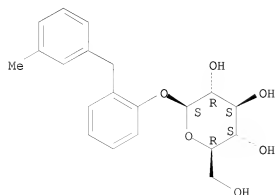
Double bond geometry unknown.



RN 363164-84-5 CAPLUS

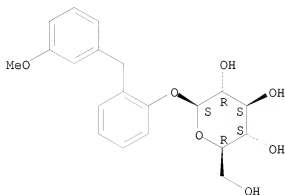
CN  $\beta$ -D-Glucopyranoside, 2-[(3-methylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



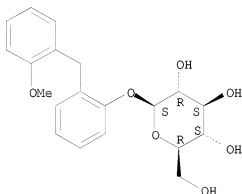
RN 363164-85-6 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[(3-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



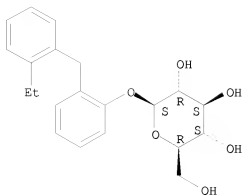
RN 363164-86-7 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[(2-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



RN 363164-87-8 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[(2-ethylphenyl)methyl]phenyl (CA INDEX NAME)

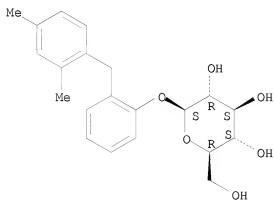
Absolute stereochemistry.



RN 363164-88-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(2,4-dimethylphenyl)methyl]phenyl (CA INDEX NAME)

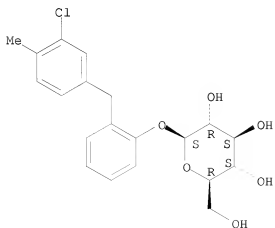
Absolute stereochemistry.



RN 363164-89-0 CAPLUS

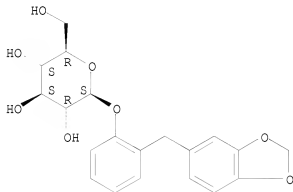
CN  $\beta$ -D-Glucopyranoside, 2-[(3-chloro-4-methylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



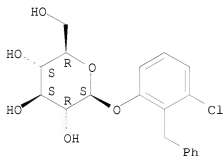
RN 363164-90-3 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 2-(1,3-benzodioxol-5-ylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



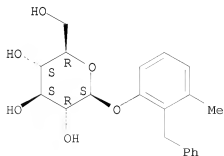
RN 363164-91-4 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 3-chloro-2-(phenylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



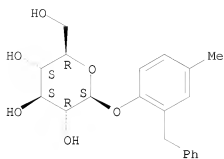
RN 363164-92-5 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 3-methyl-2-(phenylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



RN 363164-93-6 CAPLUS  
 CN  $\beta$ -D-Glucopyranoside, 4-methyl-2-(phenylmethyl)phenyl (CA INDEX NAME)

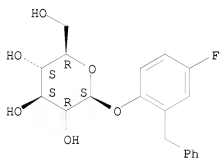
Absolute stereochemistry.



RN 363164-94-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4-fluoro-2-(phenylmethyl)phenyl (CA INDEX NAME)

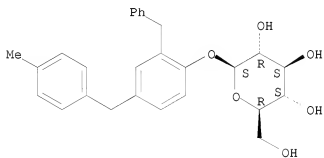
Absolute stereochemistry.



RN 363164-95-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4-[(4-methylphenyl)methyl]-2-(phenylmethyl)phenyl (CA INDEX NAME)

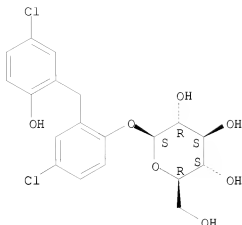
Absolute stereochemistry.



RN 363164-96-9 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4-chloro-2-[(5-chloro-2-hydroxyphenyl)methyl]phenyl (CA INDEX NAME)

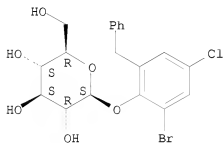
Absolute stereochemistry.



RN 363164-97-0 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-bromo-4-chloro-6-(phenylmethyl)phenyl (CA INDEX NAME)

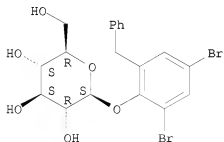
Absolute stereochemistry.



RN 363164-98-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2,4-dibromo-6-(phenylmethyl)phenyl (CA INDEX NAME)

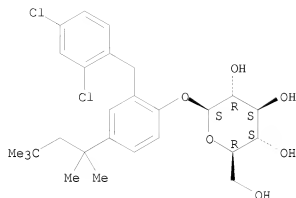
Absolute stereochemistry.



RN 363164-99-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(2,4-dichlorophenyl)methyl]-4-(1,1,3,3-tetramethylbutyl)phenyl (CA INDEX NAME)

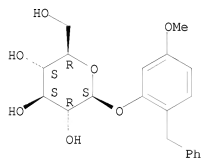
Absolute stereochemistry.



RN 363165-00-8 CAPLUS

CN β-D-Glucopyranoside, 5-methoxy-2-(phenylmethyl)phenyl (CA INDEX NAME)

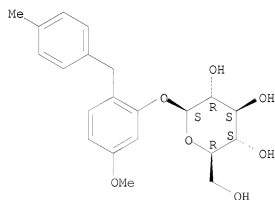
Absolute stereochemistry.



RN 363165-01-9 CAPLUS

CN β-D-Glucopyranoside, 5-methoxy-2-[(4-methylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

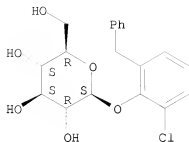


RN 363165-02-0 CAPLUS

CN β-D-Glucopyranoside, 2-(phenylmethyl)-5-propoxyphenyl (CA INDEX NAME)



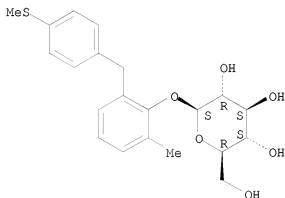




RN 363165-06-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-methyl-6-[[4-(methylthio)phenyl]methyl]phenyl  
(CA INDEX NAME)

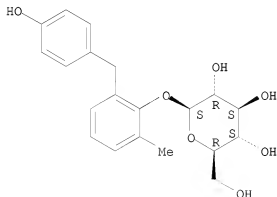
Absolute stereochemistry.



RN 363165-07-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-hydroxyphenyl)methyl]-6-methylphenyl  
(CA INDEX NAME)

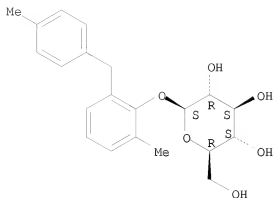
Absolute stereochemistry.



RN 363165-08-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-methyl-6-[(4-methylphenyl)methyl]phenyl  
(CA INDEX NAME)

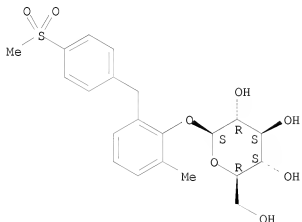
Absolute stereochemistry.



RN 363165-09-7 CAPLUS

CN β-D-Glucopyranoside, 2-methyl-6-[[4-(methylsulfonyl)phenyl]methyl]phenyl (CA INDEX NAME)

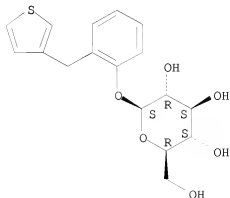
Absolute stereochemistry.



RN 363165-28-0 CAPLUS

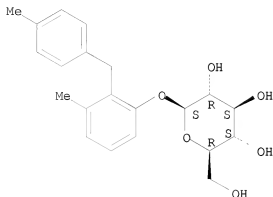
CN β-D-Glucopyranoside, 2-(3-thienylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



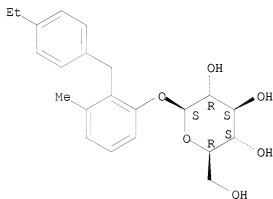
RN 363165-30-4 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 3-methyl-2-[(4-methylphenyl)methyl]phenyl (CA  
INDEX NAME)

Absolute stereochemistry.



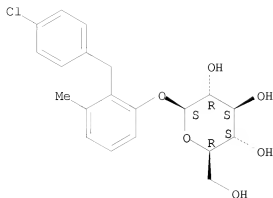
RN 363165-31-5 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-3-methylphenyl (CA  
INDEX NAME)

Absolute stereochemistry.



RN 363165-32-6 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[(4-chlorophenyl)methyl]-3-methylphenyl (CA  
INDEX NAME)

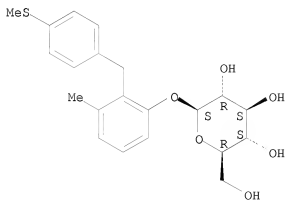
Absolute stereochemistry.



RN 363165-33-7 CAPLUS

CN β-D-Glucopyranoside, 3-methyl-2-[[4-(methylthio)phenyl]methyl]phenyl  
(CA INDEX NAME)

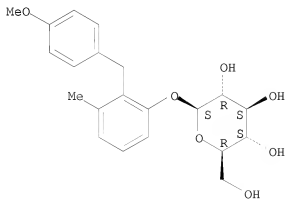
Absolute stereochemistry.



RN 363165-34-8 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-3-methylphenyl  
(CA INDEX NAME)

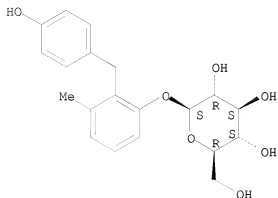
Absolute stereochemistry.



RN 363165-35-9 CAPLUS

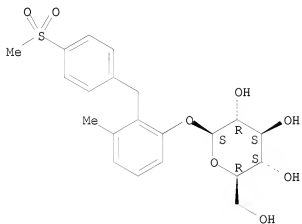
CN  $\beta$ -D-Glucopyranoside, 2-[(4-hydroxyphenyl)methyl]-3-methylphenyl (CA INDEX NAME)

Absolute stereochemistry.



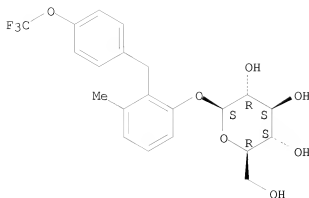
RN 363165-36-0 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 3-methyl-2-[[4-(methylsulfonyl)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



RN 363165-37-1 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 3-methyl-2-[[4-(trifluoromethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

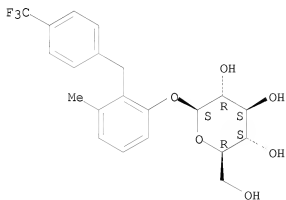
Absolute stereochemistry.



RN 363165-38-2 CAPLUS

CN β-D-Glucopyranoside, 3-methyl-2-[[4-(trifluoromethyl)phenyl]methyl]phenyl (CA INDEX NAME)

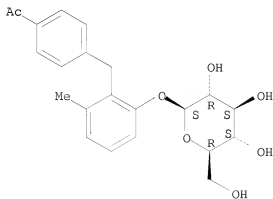
Absolute stereochemistry.



RN 363165-39-3 CAPLUS

CN Ethanone, 1-[4-[[2-(β-D-glucopyranosyloxy)-6-methylphenyl]methyl]phenyl]- (CA INDEX NAME)

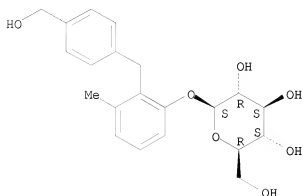
Absolute stereochemistry.



RN 363165-40-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(hydroxymethyl)phenyl]methyl]-3-methylphenyl (CA INDEX NAME)

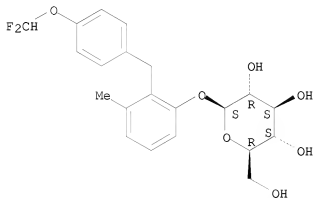
Absolute stereochemistry.



RN 363165-41-7 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(difluoromethoxy)phenyl]methyl]-3-methylphenyl (CA INDEX NAME)

Absolute stereochemistry.

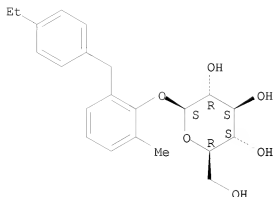


RN 363165-42-8 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-6-methylphenyl (CA INDEX NAME)

Absolute stereochemistry.

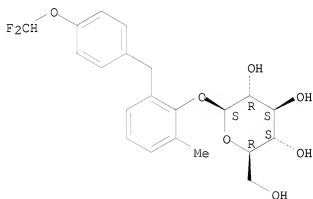




RN 363165-43-9 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(difluoromethoxy)phenyl]methyl]-6-methylphenyl (CA INDEX NAME)

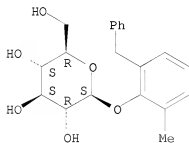
Absolute stereochemistry.



RN 363165-44-0 CAPLUS

CN β-D-Glucopyranoside, 2-methyl-6-(phenylmethyl)phenyl (CA INDEX NAME)

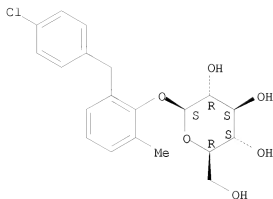
Absolute stereochemistry.



RN 363165-45-1 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-chlorophenyl)methyl]-6-methylphenyl (CA INDEX NAME)

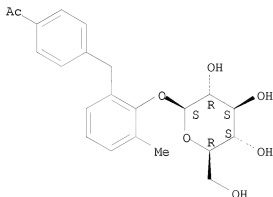
Absolute stereochemistry.



RN 363165-46-2 CAPLUS

CN Ethanone, 1-[4-[[2-(β-D-glucopyranosyloxy)-3-methylphenyl]methyl]phenyl]- (CA INDEX NAME)

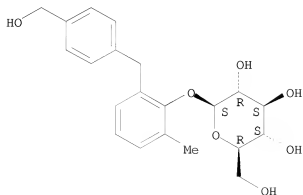
Absolute stereochemistry.



RN 363165-47-3 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(hydroxymethyl)phenyl]methyl]-6-methylphenyl (CA INDEX NAME)

Absolute stereochemistry.

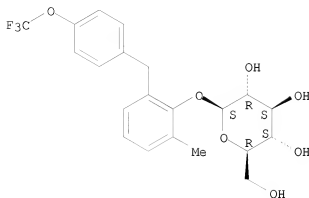


RN 363165-48-4 CAPLUS

CN β-D-Glucopyranoside, 2-methyl-6-[[4-(trifluoromethoxy)phenyl]methyl]p

henyl (CA INDEX NAME)

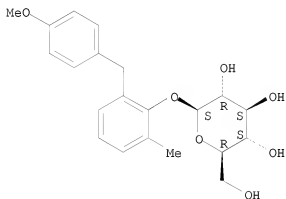
Absolute stereochemistry.



RN 363165-49-5 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-6-methylphenyl (CA INDEX NAME)

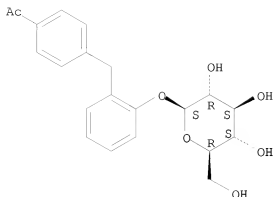
Absolute stereochemistry.



RN 363165-50-8 CAPLUS

CN Ethanone, 1-[4-[[2-(β-D-glucopyranosyloxy)phenyl]methyl]phenyl]- (CA INDEX NAME)

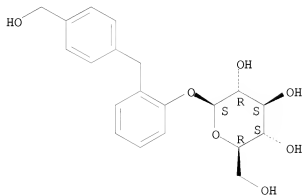
Absolute stereochemistry.



RN 363165-51-9 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(hydroxymethyl)phenyl]methyl]phenyl (CA INDEX NAME)

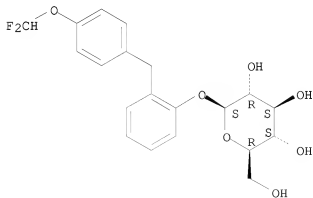
Absolute stereochemistry.



RN 363165-52-0 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(difluoromethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

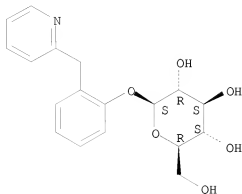
Absolute stereochemistry.



RN 363165-53-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(2-pyridinylmethyl)phenyl (CA INDEX NAME)

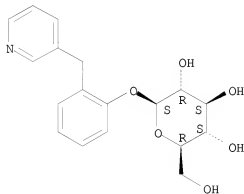
Absolute stereochemistry.



RN 363165-54-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(3-pyridinylmethyl)phenyl (CA INDEX NAME)

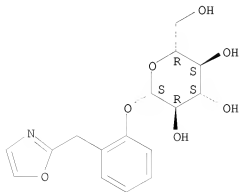
Absolute stereochemistry.



RN 363165-55-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(2-oxazolylmethyl)phenyl (CA INDEX NAME)

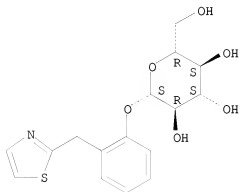
Absolute stereochemistry.



RN 363165-56-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(2-thiazolylmethyl)phenyl (CA INDEX NAME)

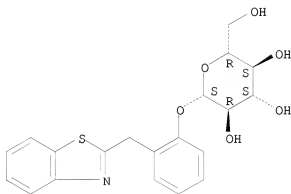
Absolute stereochemistry.



RN 363165-57-5 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(2-benzothiazolylmethyl)phenyl (CA INDEX NAME)

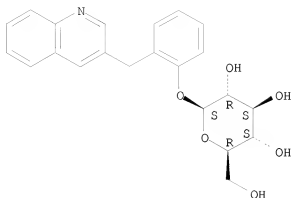
Absolute stereochemistry.



RN 363165-58-6 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-(3-quinolinylmethyl)phenyl (CA INDEX NAME)

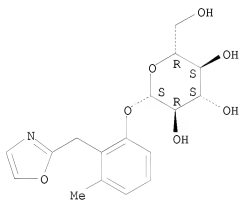
Absolute stereochemistry.



RN 363165-59-7 CAPLUS

CN β-D-Glucopyranoside, 3-methyl-2-(2-oxazolylmethyl)phenyl (CA INDEX NAME)

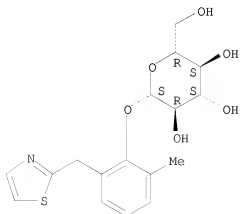
Absolute stereochemistry.



RN 363165-60-0 CAPLUS

CN β-D-Glucopyranoside, 2-methyl-6-(2-thiazolylmethyl)phenyl (CA INDEX NAME)

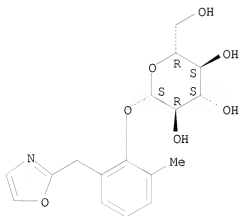
Absolute stereochemistry.



RN 363165-61-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-methyl-6-(2-oxazolylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L4 ANSWER 36 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:693332 CAPLUS

DOCUMENT NUMBER: 135:242456

TITLE: Preparation of (2-glucopyranosyloxybenzyl)benzene derivatives, medicinal compositions containing the same and intermediates for the preparation of the derivatives

INVENTOR(S): Fujikura, Hideki; Fushimi, Nobuhiko; Nishimura, Toshihiro; Tatani, Kazuya; Katsuno, Kenji; Hiratochi, Masahiro; Tokutake, Yoshiki; Isaji, Masayuki

PATENT ASSIGNEE(S): Kissei Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

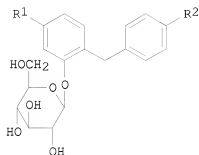
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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EP 1270584	B1	20051207		
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A3 20020916  
A1 20021230

OTHER SOURCE(S):  
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MARPAT 135:242456

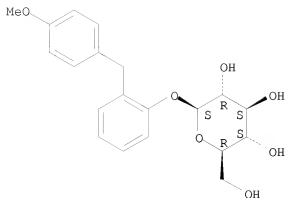


AB [2-( $\beta$ -D-Glucopyranosyloxy)benzyl]benzene derivs. of the general formula (I; wherein R1 is hydrogen or hydroxylated lower alkyl; R2 is lower alkyl, lower alkoxy, lower alkylthio, hydroxylated lower alkyl, hydroxylated lower alkoxy, hydroxylated lower alkylthio, or the like.) and salts thereof and intermediates for the preparation of the derivs. are prepared. These compounds exhibit excellent human sodium-dependent glucose-transporter (SGLT2)-inhibiting activity and are useful as preventive or therapeutic drugs for diseases caused by hyperglycemia such as diabetes, diabetes complications, and obesity. Thus, a solution of 5-acetoxymethyl-2-(4-ethylbenzyl)phenol and 2,3,4,6-tetra-O-acetyl-1-O-trichloroacetimidoyl- $\alpha$ -D-glucopyranose was stirred in the presence of Et<sub>2</sub>O.BF<sub>3</sub> in CH<sub>2</sub>Cl<sub>2</sub> at room temperature for 1 h to give 5-acetoxymethyl-2-(4-ethylbenzyl)phenyl 2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranoside which was stirred with NaOMe in MeOH at room temperature for 30 min to give 2-(4-ethylbenzyl)-5-hydroxymethylphenyl  $\beta$ -D-glucopyranoside (II). II in vitro showed IC<sub>50</sub> of 8.1 nM for inhibiting the uptake of Me  $\alpha$ -D-(U-14C)glucopyranoside into COS-7 cells over-expressing human SGLT2 and in vivo at 1 mg/kg body weight i.v. promoted the urinary excretion of glucose in SD rats with 238.9 mg/200 g body weight.

IT 360775-96-8P 360775-97-9P 360775-98-0P  
360775-99-1P 360776-00-7P 360776-01-8P  
360776-02-9P 360776-03-0P 360776-04-1P  
360776-05-2P 360776-06-3P 360776-07-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of (glucopyranosyloxybenzyl)benzene derivs. as SGLT2 inhibitors for treatment and/or prevention of diabetes, diabetes complications, and obesity)

RN 360775-96-8 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]phenyl (CA INDEX NAME)

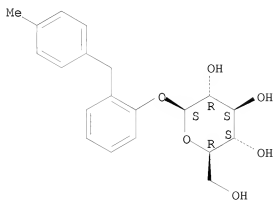
Absolute stereochemistry.



RN 360775-97-9 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-methylphenyl)methyl]phenyl (CA INDEX NAME)

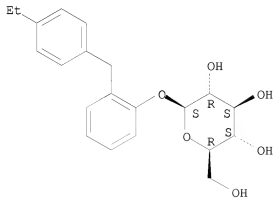
Absolute stereochemistry.



RN 360775-98-0 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.

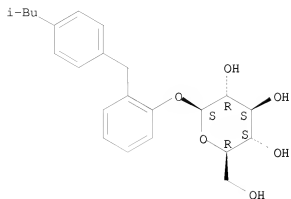


RN 360775-99-1 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(2-methylpropyl)phenyl]methyl]phenyl (CA INDEX NAME)

INDEX NAME)

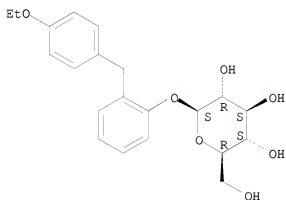
Absolute stereochemistry.



RN 360776-00-7 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-ethoxyphenyl)methyl]phenyl (CA INDEX NAME)

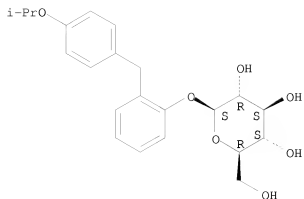
Absolute stereochemistry.



RN 360776-01-8 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(1-methylethoxy)phenyl]methyl]phenyl (CA INDEX NAME)

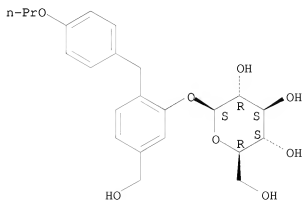
Absolute stereochemistry.



RN 360776-02-9 CAPLUS

CN β-D-Glucopyranoside, 5-(hydroxymethyl)-2-[(4-propoxyphenyl)methyl]phenyl (CA INDEX NAME)

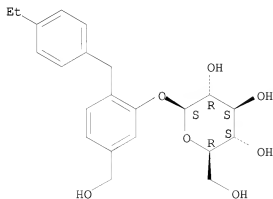
Absolute stereochemistry.



RN 360776-03-0 CAPLUS

CN β-D-Glucopyranoside, 2-[(4-ethylphenyl)methyl]-5-(hydroxymethyl)phenyl (CA INDEX NAME)

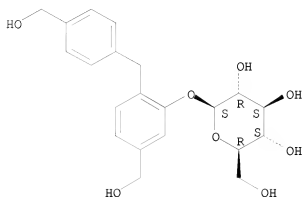
Absolute stereochemistry.



RN 360776-04-1 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 5-(hydroxymethyl)-2-[[4-(hydroxymethyl)phenyl]methyl]phenyl (CA INDEX NAME)

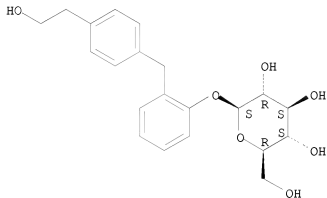
Absolute stereochemistry.



RN 360776-05-2 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(2-hydroxyethyl)phenyl]methyl]phenyl (CA INDEX NAME)

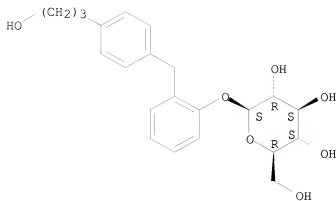
Absolute stereochemistry.



RN 360776-06-3 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 2-[[4-(3-hydroxypropyl)phenyl]methyl]phenyl (CA INDEX NAME)

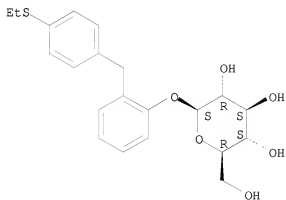
Absolute stereochemistry.



RN 360776-07-4 CAPLUS

CN β-D-Glucopyranoside, 2-[[4-(ethylthio)phenyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

11

THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2001:502694 CAPLUS

DOCUMENT NUMBER: 135:301038

TITLE: Benzophenone O-glucoside, a biogenic precursor of

1,3,7-trioxygenated xanthenes in *Hypericum annulatum*

AUTHOR(S): Kitanov, G. M.; Nedialkov, P. T.

CORPORATE SOURCE: Faculty of Pharmacy, Department of Pharmacognosy,

Medical University of Sofia, Sofia, 1000, Bulg.

SOURCE: Phytochemistry (2001), 57(8), 1237-1243

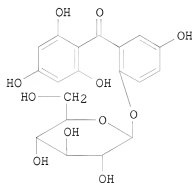
CODEN: PYTCAS; ISSN: 0031-9422

PUBLISHER: Elsevier Science Ltd.

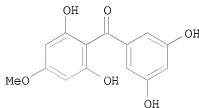
DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I



II

AB Two benzophenones, hypericophenonoside (I) and 2,3',5',6-tetrahydroxy-4-methoxybenzophenone (annulatophenone, II) were isolated from aerial parts of *Hypericum annulatum*. Acid and enzymic hydrolysis of I has led directly to the formation of 1,3,7-trihydroxyxanthone (gentisein).

IT 366493-03-0P, Hypericophenonoside

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)

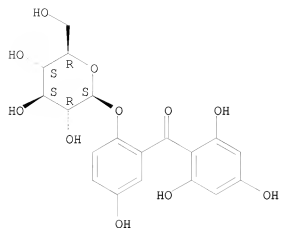
(benzophenone O-glucoside from *Hypericum annulatum*)

RN 366493-03-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-5-hydroxyphenyl](2,4,6-trihydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).





REFERENCE COUNT:

13

THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 38 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:457038 CAPLUS  
 DOCUMENT NUMBER: 135:192860  
 TITLE: Three Xanthonones and a Benzophenone from *Garcinia mangostana*  
 AUTHOR(S): Huang, Yu-Ling; Chen, Chien-Chih; Chen, Ying-Jen; Huang, Ray-Ling; Shieh, Bor-Jinn  
 CORPORATE SOURCE: National Research Institute of Chinese Medicine, Taipei, Taiwan  
 SOURCE: Journal of Natural Products (2001), 64(7), 903-906  
 CODEN: JNPRDF; ISSN: 0163-3864  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

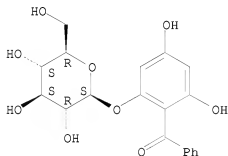
AB Investigation of the constituents of *Garcinia mangostana* has led to the isolation of four new compds.: three minor xanthonones, garcimangosone A (I), garcimangosone B (II), and garcimangosone C (III), and a benzophenone glucoside, garcimangosone D (IV). The structures of these four compds. were established by spectral (NMR and MS) and chemical methods.

IT 356055-68-0P  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (three xanthonones and a benzophenone from *Garcinia mangostana*)

RN 356055-68-0 CAPLUS

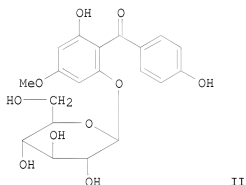
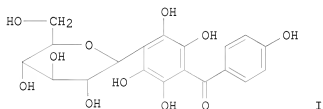
CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl]phenyl-  
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2000:658751 CAPLUS  
 DOCUMENT NUMBER: 133:360824  
 TITLE: Benzophenone glycosides from *Gnidia involucreta*  
 AUTHOR(S): Ferrari, J.; Terreaux, C.; Sahpaz, S.; Msonthi, J. D.;  
 Wolfender, J.-L.; Hostettmann, K.  
 CORPORATE SOURCE: Institut de Pharmacognosie et Phytochimie, BEP,  
 Universite de Lausanne, Lausanne, CH-1015, Switz.  
 SOURCE: Phytochemistry (2000), 54(8), 883-889  
 CODEN: PYTCAS; ISSN: 0031-9422  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



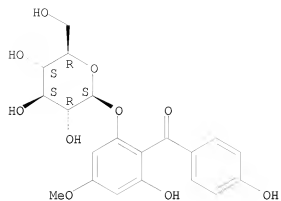
AB Six compds. have been isolated from the methanol extract of the aerial parts of *Gnidia involucreta* (Thymelaeaceae). They were identified as 2,3,4',5,6-pentahydroxybenzophenone-4-C-glucoside (I) and 2,4',6-trihydroxy-4-methoxybenzophenone-2-O-glucoside (II), together with mangiferin, kaempferol-3-O-glucoside, yuankanin and manniflavanone by chemical and spectroscopic means. The structures of three addnl. C-glycosyl flavones - vitexin, isovitexin and isoorientin - were determined online by LC/UV/APCI-MSn anal. of the crude extract

IT 307502-06-3P  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (benzophenone glycosides from *Gnidia involucreta*)

RN 307502-06-3 CAPLUS

CN Methanone, [2-(β-D-glucopyranosyloxy)-6-hydroxy-4-methoxyphenyl] (4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

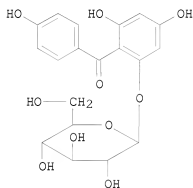


REFERENCE COUNT:

27

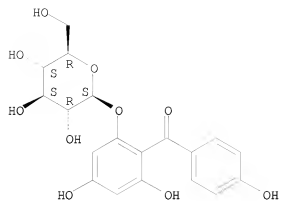
THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 40 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:590833 CAPLUS  
 DOCUMENT NUMBER: 133:307551  
 TITLE: Flavonoid and benzophenone glycosides from *Coleogyne ramosissima*  
 AUTHOR(S): Ito, H.; Nishitani, E.; Konoshima, T.; Takasaki, M.; Kozuka, M.; Yoshida, T.  
 CORPORATE SOURCE: Fac. Pharm. Sci., Okayama Univ., Tsushima, Okayama, 700-8530, Japan  
 SOURCE: Phytochemistry (2000), 54(7), 695-700  
 CODEN: PYTCAS; ISSN: 0031-9422  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



- AB A benzophenone glycoside and two flavonol glycosides were isolated together with 27 known polyphenols from the aerial parts of *Coleogyne ramosissima*, and their structures were elucidated by spectroscopic and chemical methods as iriflophenone 2-O- $\beta$ -glucopyranoside (I), isorhamnetin 3-O-2G-rhamnopyranosylrutinoside-7-O- $\alpha$ -rhamnopyranoside and limocitrin 3-O-rutinoside-7-O- $\beta$ -glucopyranoside, resp.
- IT 245447-83-0P  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (from *Coleogyne ramosissima*)
- RN 245447-83-0 CAPLUS
- CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl](4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

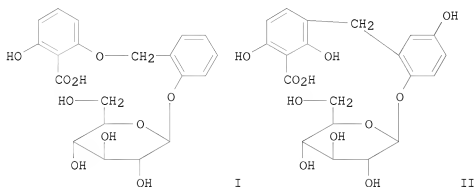


REFERENCE COUNT:

24

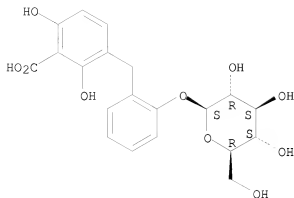
THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 41 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:556704 CAPLUS  
 DOCUMENT NUMBER: 133:263862  
 TITLE: Phenolic glycosides from the leaves of *Alangium*  
*platanifolium* var. *platanifolium*  
 AUTHOR(S): Tamaki, Akie; Ide, Toshinori; Otsuka, Hideaki  
 CORPORATE SOURCE: Institute of Pharmaceutical Sciences, Hiroshima  
 University School of Medicine, Hiroshima, 734-8551,  
 Japan  
 SOURCE: Journal of Natural Products (2000), 63(10), 1417-1419  
 CODEN: JNPRDF; ISSN: 0163-3864  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



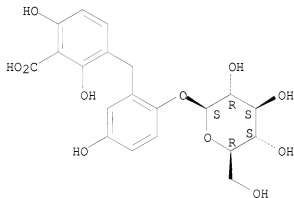
AB Chemical investigation of *Alangium platanifolium* var. *platanifolium* has resulted in the isolation of nine phenolic glycosides that were identified by means of 1D and 2D NMR expts. Among them, catechol and salicinol O- and 1-O- $\beta$ -D-(6-O- $\beta$ -D-apiofuranosyl)glucopyranosides, and two compds. characterized as adducts of 2,6-dihydroxybenzoic acid with salicin (plataplatanoside, I) and 4-hydroxysalicin (4-hydroxyalangi-folioside, II) were determined structurally as new compds.  
 IT 125574-31-4, Alangi-folioside  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (from *Alangium platanifolium* var. *platanifolium*)  
 RN 125574-31-4 CAPLUS  
 CN Benzoic acid, 3-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]-2,6-dihydroxy- (CA INDEX NAME)

Absolute stereochemistry.



IT 297163-45-2P  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (phenolic glycosides from *Alangium platanifolium* var. *platanifolium*)  
 RN 297163-45-2 CAPLUS  
 CN Benzoic acid, 3-[[2-( $\beta$ -D-glucopyranosyloxy)-5-hydroxyphenyl]methyl]-2,6-dihydroxy- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L4 ANSWER 42 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:536082 CAPLUS

DOCUMENT NUMBER: 131:266577

TITLE: Anti-tumor promoting activity of polyphenols from Cowania mexicana and Coleogyne ramosissima

AUTHOR(S): Ito, Hideyuki; Miyake, Masateru; Nishitani, Eisei; Mori, Kazuko; Hatano, Tsutomu; Okuda, Takuo; Konoshima, Takao; Takasaki, Midori; Kozuka, Mutsuo; Mukainaka, Teruo; Tokuda, Harukuni; Nishino, Hoyoku; Yoshida, Takashi

CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Okayama University, Tsushima, 700-8530, Japan

SOURCE: Cancer Letters (Shannon, Ireland) (1999), 143(1), 5-13  
CODEN: CALEDQ; ISSN: 0304-3835

PUBLISHER: Elsevier Science Ireland Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chemical investigation on polyphenol-rich fractions of Cowania mexicana and Coleogyne ramosissima (Rosaceae) which showed significant inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA), has led to the characterization of 10 compds. including C-glucosidic ellagitannin monomers and dimers from the former plant, and 17 polyphenols including flavonoid glycosides from the latter. The effects of individual components and their analogs with related structures on the TPA-induced EBV-EA activation were then evaluated. Among the compds. isolated from C. mexicana, two C-glucosidic ellagitannins, alienanin B and stenophyllanin A and a nitrile glucoside (lithospermoxide), and among the constituents from C. ramosissima, two flavonoid glycosides, isorhamnetin 3-O- $\beta$ -D-glucoside and narcissin were revealed to possess strong inhibitory effects on EBV-EA activation, the potencies of which were either comparable to or stronger than that of a green tea polyphenol, (-)-epigallocatechin gallate. These polyphenols except for nitrile glucoside, which was not tested owing to an insufficient amount, were also found to exhibit anti-tumor promoting activity in two-stage mouse skin carcinogenesis using 7,12-dimethylbenz[a]anthracene (DMBA) and TPA.

IT 245447-83-0P

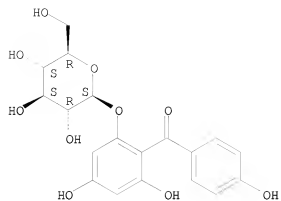
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)

(anti-tumor promoting activity of polyphenols from Cowania mexicana and Coleogyne ramosissima in relation to structure)

RN 245447-83-0 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dihydroxyphenyl](4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT:

28

THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:519864 CAPLUS  
 DOCUMENT NUMBER: 132:134724  
 TITLE: Acetophenone derivatives from Euphorbia ebracteolata Hayata  
 AUTHOR(S): Wang, Wenxiang; Ding, Xingbao  
 CORPORATE SOURCE: Institute of Materia Medica, Shandong Academy of Medical Sciences, Jinan, 250062, Peop. Rep. China  
 SOURCE: Yaoxue Xuebao (1999), 34(7), 514-517  
 CODEN: YHHPAL; ISSN: 0513-4870  
 PUBLISHER: Yaoxue Xuebao Bianjibu  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

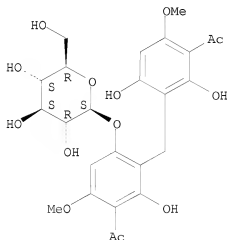
AB Acetophenone derivs. from Euphorbia ebracteolata Hayata were isolated and purified with silica gel chromatog., and their chemical structures were identified by their physicochem. properties and spectral data. Five acetophenone derivs. were isolated from the plant as the following: 2,4-dihydroxy-6-methoxy-3-methylacetophenone (1), 3,3'-diacetyl-4,4'-dimethoxy-2,2',6,6'-tetrahydroxy diphenylmethane, 3,3'-diacetyl-4,4'-dimethoxy-2,2',6,6'-tetrahydroxy diphenylmethane-6'-O- $\beta$ -D-glucopyranoside (3), 2,4-dihydroxy-6-methoxy-3-methylacetophenone-4-O- $\beta$ -D-glucopyranoside (4), and 2,4-dihydroxy-6-methoxy-3-methylacetophenone-4-O- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside (5). Compds. 3 and 5 were named ebractelatinoside B and ebractelatinoside C resp.

IT 256653-66-4P, Ebractelatinoside B  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (acetophenone derivs. from Euphorbia ebracteolata Hayata)

RN 256653-66-4 CAPLUS

CN Ethanone, 1-[3-[(3-acetyl-2,6-dihydroxy-4-methoxyphenyl)methyl]-4-( $\beta$ -D-glucopyranosyloxy)-2-hydroxy-6-methoxyphenyl]- (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 44 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:678817 CAPLUS

DOCUMENT NUMBER: 130:60589

TITLE: Inhibitory effect of lichen metabolites and their synthetic analogs on melanin biosynthesis in cultured B-16 mouse melanoma cells

AUTHOR(S): Matubara, H.; Miharu, K.; Kinoshita, K.; Koyama, K.; Ye, Yang; Takahashi, K.; Yoshimura, I.; Yamamoto, Y.; Miura, Y.; Kinoshita, Y.

CORPORATE SOURCE: Nippon Paint Co. Ltd., Neyagawa, 572, Japan

SOURCE: Natural Product Sciences (1998), 4(3), 161-169

CODEN: NPSCFB; ISSN: 1226-3907

PUBLISHER: Korean Society of Pharmacognosy

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The analogs of lichen components showing anti-tyrosinase activities were synthesized. 4-Alkylresorcinol derivs. showed both the inhibitory activity and inhibition of B-16 melanoma cells at 10 mM to 1.2 mM. Resorcinol and 4-methylresorcinol showed the inhibitory effect with a low cytotoxicity at the doses of 2.5 mM and 600  $\mu$ M among 4-alkylresorcinols, resp. Some diphenylmethane derivs. had strong activities with a low cytotoxicity. While xanthene derivs. had no effect. Glucosides of 4,5-alkylresorcinol and diphenylmethane derivative were prepared to cytotoxicity was examined; no effect was found. Liposome of diphenylmethane derivative was prepared for the same purpose, and the latter showed a remarkable effect at 15  $\mu$ M with a low cytotoxicity.

IT 197307-51-0P

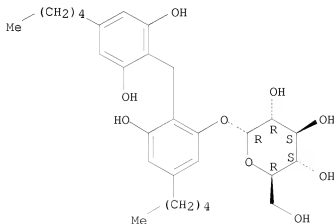
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and inhibitory effect of lichen metabolites and their synthetic analogs on melanin biosynthesis in cultured B-16 mouse melanoma cells)

RN 197307-51-0 CAPLUS

CN  $\alpha$ -D-Glucopyranoside, 2-[(2,6-dihydroxy-4-pentylphenyl)methyl]-3-hydroxy-5-pentylphenyl (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 45 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:618655 CAPLUS  
DOCUMENT NUMBER: 127:311371  
ORIGINAL REFERENCE NO.: 127:60813a,60816a  
TITLE: Tyrosinase inhibitors comprising resorcin glycosides  
with improved water solubility and reduced  
cytotoxicity  
INVENTOR(S): Matsubara, Hideki; Kinoshita, Yasuhiro; Yamamoto,  
Yoshikazu  
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09241128	A	19970916	JP 1996-44991	19960301
PRIORITY APPLN. INFO.:			JP 1996-44991	19960301
OTHER SOURCE(S):	MARPAT	127:311371		

GI

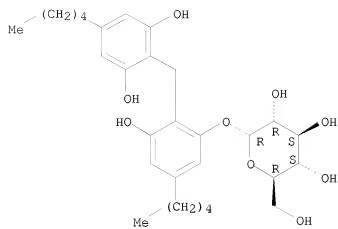
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Tyrosinase inhibitors comprise monoglycosides of resorcins I (R1 = C, C1-9 alkyl, alkenyl) or II (R2 = C1-9 alkyl, alkenyl) or methylenebisresorcins III (R3-4 = H, C1-9 alkyl, alkenyl), IV (R3-4 = H, C1-9 alkyl, alkenyl), or V (R3-4 = H, C1-9 alkyl, alkenyl) in which  $\geq 1$  OH is glycosylated. The glycosides with improved water soluble are useful for skin-lightening cosmetics, antifouling paints, etc. Solubility of 5-pentylresorcinol- $\beta$ -monoglucoside (preparation given) in 10 mg water was 20 mM, vs. 10 mM for 5-pentylresorcinol. 4-Pentylresorcinol- $\beta$ -monoglucoside showed 93.4% tyrosinase-inhibiting activity and 75.7% cytotoxicity in mouse B16 melanoma cell, vs. 96.3% cytotoxicity of 4-pentylresorcinol.

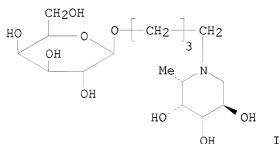
IT 197307-51-0P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of resorcin glycosides as tyrosinase inhibitors with improved water solubility and reduced cytotoxicity)

RN 197307-51-0 CAPLUS  
CN  $\alpha$ -D-Glucopyranoside, 2-[(2,6-dihydroxy-4-pentylphenyl)methyl]-3-hydroxy-5-pentylphenyl (CA INDEX NAME)

Absolute stereochemistry.

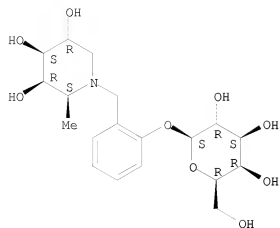


L4 ANSWER 46 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:357315 CAPLUS  
 DOCUMENT NUMBER: 127:66048  
 ORIGINAL REFERENCE NO.: 127:12631a,12634a  
 TITLE: Synthesis of inhibitors of  $\alpha$ -1,3-fucosyltransferase  
 AUTHOR(S): Jefferies, Ian; Bowen, Benjamin R.  
 CORPORATE SOURCE: Central Research laboratories, Ciba Geigy PLC, Cheshire, SK10 2NX, UK  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (1997), 7(9), 1171-1174  
 CODEN: BMCLE8; ISSN: 0960-894X  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB A new class of compds., e.g. I, structurally modified derivs. of the  $\alpha$ -fucosidase inhibitor deoxyfuconojirimycin, has been prepared and found to display activity as inhibitors of  $\alpha$ -1,3-fucosyltransferase in the  $\mu$ M range.  
 IT 191276-07-0P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation of inhibitors of fucosyltransferase)  
 RN 191276-07-0 CAPLUS  
 CN  $\beta$ -D-Galactopyranoside, 2-[[[(2S,3R,4S,5R)-3,4,5-trihydroxy-2-methyl-1-piperidinyl]methyl]phenyl (CA INDEX NAME)

Absolute stereochemistry.



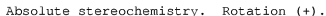
REFERENCE COUNT:

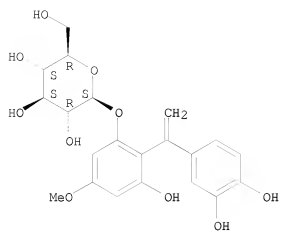
17

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



GI





L4 ANSWER 48 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:115723 CAPLUS

DOCUMENT NUMBER: 112:115723

ORIGINAL REFERENCE NO.: 112:19527a,19530a

TITLE: Alangifolioside, a diphenylmethyle derivative, and other phenolics from the leaves of Alangium platanifolium var. trilobum

AUTHOR(S): Otsuka, Hideaki; Yamasaki, Kazuo; Yamauchi, Tatsuo

CORPORATE SOURCE: Sch. Med., Hiroshima Univ., Hiroshima, 734, Japan

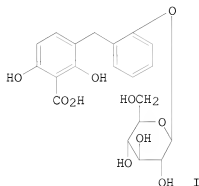
SOURCE: Phytochemistry (1989), 28(11), 3197-200

CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB From the methanolic extract of leaves of *A. platanifolium trilobum*, henryoside, 2,6-dihydroxybenzoic acid and alangigolioside (I), along with 5 known flavonol glycosides were isolated.

IT 125574-31-4, Alangifolioside

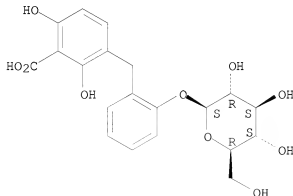
RL: BIOL (Biological study)

(from *Alangium platanifolium trilobum*, isolation and structure of)

RN 125574-31-4 CAPLUS

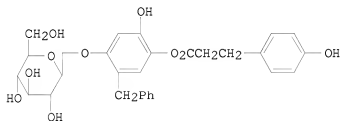
CN Benzoic acid, 3-[[2-( $\beta$ -D-glucopyranosyloxy)phenyl]methyl]-2,6-dihydroxy- (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 49 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

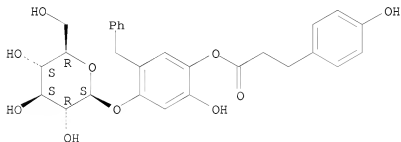
ACCESSION NUMBER: 1989:530712 CAPLUS  
DOCUMENT NUMBER: 111:130712  
ORIGINAL REFERENCE NO.: 111:21807a, 21810a  
TITLE: Punarnavoside: a new antifibrinolytic agent from Boerhaavia diffusa Linn  
AUTHOR(S): Jain, G. K.; Khanna, N. M.  
CORPORATE SOURCE: Cent. Drug Res. Inst., Lucknow, 226 001, India  
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1989), 28B(2), 163-6  
CODEN: IJSBDB; ISSN: 0376-4699  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 111:130712  
GI



I

AB Punarnavoside (I), a new antifibrinolytic agent isolated from the roots of *B. diffusa* has been characterized as 2-glucopyrano-4-hydroxy-5-(p-hydroxyphenyl)-propionyl-diphenylmethane by spectral anal. and chemical degradation. Punarnavoside stopped IUCD-associated bleeding episodes in rhesus monkeys when fed orally at 25 mg/kg body weight for seven days.  
IT 106009-02-3, Punarnavoside  
RL: BIOL (Biological study)  
(from *Boerhaavia diffusa* roots, isolation and structure and antifibrinolytic action of)  
RN 106009-02-3 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 5-hydroxy-4-[3-(4-hydroxyphenyl)-1-oxopropoxy]-2-(phenylmethyl)phenyl (9CI) (CA INDEX NAME)

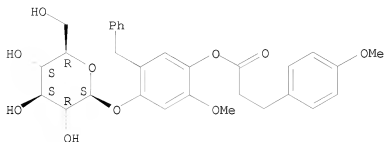
Absolute stereochemistry.



IT 122738-95-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and hydrolysis of)  
RN 122738-95-8 CAPLUS  
CN  $\beta$ -D-Glucopyranoside, 5-methoxy-4-[3-(4-methoxyphenyl)-1-oxopropoxy]-2-

(phenylmethyl)phenyl (9CI) (CA INDEX NAME)

Absolute stereochemistry.



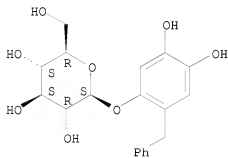
IT 122738-91-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 122738-91-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4,5-dihydroxy-2-(phenylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 50 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:404328 CAPLUS

DOCUMENT NUMBER: 107:4328

ORIGINAL REFERENCE NO.: 107:799a,802a

TITLE: Biotransformation of a [14C-methyl]-2-

AUTHOR(S): methylaminobenzophenone by plant cell cultures  
Baumert, A.; Rosza, Z.; Schliemann, W.; Lewis, J. R.;  
Groeger, D.

CORPORATE SOURCE: Inst. Biochem. Pflanzen, Akad. Wiss. DDR, Halle/Saale,  
DDR-4050, Ger. Dem. Rep.

SOURCE: Planta Medica (1987), 53(1), 90-2

CODEN: PLMEAA; ISSN: 0032-0943

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 2-[14C]Methylamino-2',4'-dimethoxy-6'-hydroxybenzophenone (I) was  
synthesized and administered to *Ruta graveolens* cell suspension cultures.  
I was not incorporated into acridone alkaloids but glucosylated. This  
reaction also takes place in cell suspension cultures of *Adhatoda vasica*  
and *Peganum harmala*.

IT 108567-59-5

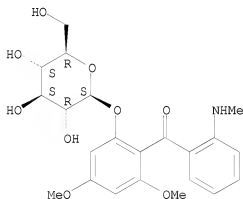
RL: FORM (Formation, nonpreparative)

(formation of, from methylaminobenzophenone, by plant cell cultures)

RN 108567-59-5 CAPLUS

CN Methanone, [2-( $\beta$ -D-glucopyranosyloxy)-4,6-dimethoxyphenyl][2-  
(methylamino)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 51 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:38534 CAPLUS

DOCUMENT NUMBER: 106:38534

ORIGINAL REFERENCE NO.: 106:6357a,6360a

TITLE: Estimation of punarnavoside, a new antifibrinolytic

compound from Boerhaavia diffusa

AUTHOR(S): Seth, R. K.; Khanna, Madhu; Chaudhary, M.; Singh, S.; Sarin, J. P. S.

CORPORATE SOURCE: Div. Pharm., Cent. Drug Res. Inst., Lucknow, India

SOURCE: Indian Drugs (1986), 23(10), 583-4

CODEN: INDRBA; ISSN: 0019-462X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Punarnavoside (I) [106009-02-3] was determined in liquid exts. of Punarnava and in B. diffusa roots by TLC and spectrophotometry at 285 nm. MeOH-CHCl<sub>3</sub>-AcOH-benzene (3:17:0.4:2) was used as the mobile phase. Beer's law was obeyed in the concentration range 10-100 µg/mL. The I content in various samples of the liquid extract was 0.045-0.175%. The I content in the root samples was 0.032-0.045%. Recovery was 96-103%. The I content remained constant for 18 mo when stored at room temperature, later decreasing

and showing 40-50% of the initial content in 6 mo.

IT 106009-02-3

RL: ANT (Analyte); ANST (Analytical study)

(determination of, in Boerhaavia diffusa roots and in liquid preps. by TLC

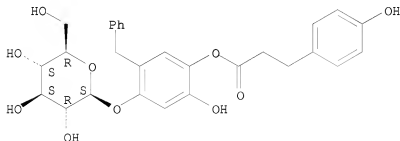
and

spectrophotometry)

RN 106009-02-3 CAPLUS

CN β-D-Glucopyranoside, 5-hydroxy-4-[3-(4-hydroxyphenyl)-1-oxopropoxy]-2-(phenylmethyl)phenyl (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 52 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1981:481409 CAPLUS

DOCUMENT NUMBER: 95:81409

ORIGINAL REFERENCE NO.: 95:13783a,13786a

TITLE: Attempts to react methylenediphenols with glucose derivatives and to condense O-phenylglucoside derivatives

AUTHOR(S): Kaemmerer, Hermann; Ritz, Juergen

CORPORATE SOURCE: Abt. Lehramtskandidaten/Fachber. Chem., Univ. Mainz, Mainz, 6500, Fed. Rep. Ger.

SOURCE: Makromolekulare Chemie (1981), 182(5), 1351-61

CODEN: MACEAK; ISSN: 0025-116X

DOCUMENT TYPE: Journal

LANGUAGE: German

AB Attempts to apply known methods of glucosidation to oligo[(hydroxyphenylene)methylene]s were not satisfactory. The reaction of 4,4'-dimethyl-2,2'-methylenediphenol with 2,3,4,6-tetra-O-acetyl- $\alpha$ -D-glucopyranosyl bromide gave a monoglucoside in 11% yield. A second attempt, the condensation of suitable O-Ph glucoside derivs. was unsuccessful. From a series of O-Ph glucosides only 4-(2,3,4,6-tetra-O-acetyl- $\alpha$ -D-glucopyranosyloxy)benzyl bromide could be condensed with O-(4-hydroxymethylphenyl)-2,3,4,6-tetra-O-acetylglucopyranose to the corresponding diglucoside of 4,4'-oxydimethylenediphenol.

IT 78637-04-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 78637-04-4 CAPLUS

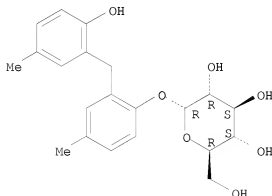
CN  $\alpha$ -D-Glucopyranoside, 2-[(2-hydroxy-5-methylphenyl)methyl]-4-methylphenyl, diacetate (9CI) (CA INDEX NAME)

CM 1

CRN 78637-03-3

CMF C21 H26 O7

Absolute stereochemistry.



CM 2

CRN 64-19-7

CMF C2 H4 O2





L4 ANSWER 53 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:98327 CAPLUS

DOCUMENT NUMBER: 82:98327

ORIGINAL REFERENCE NO.: 82:15709a,15712a

TITLE: Circular dichroism. LXVI. Chiroptical properties of some mono- and polysubstituted phenyl glycosides

AUTHOR(S): Levai, Albert; Liptak, Andras; Pinter, Istvan;

Snatzke, Guenther

CORPORATE SOURCE: Ruhr-Univ. Bochum, Bochum, Fed. Rep. Ger.

SOURCE: Acta Chimica Academiae Scientiarum Hungaricae (1975), 84(1), 99-107

CODEN: ACASA2; ISSN: 0001-5407

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The substitution pattern of the aryl ring for Ph glycosides generally did not influence the sign of the Cotton effects as long as the substituents were not strong perturbers. Both the 1B2u and the 1B1u band CD are neg. for  $\beta$ -glycosides and pos. for  $\alpha$ -glycosides. Steric and/or electronic effects of ortho substituted compds. may change the sign of some CD bands of the aromatic chromophore.

IT 55325-19-4

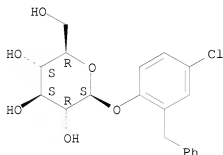
RL: PROC (Process)

(circular dichroism studies of)

RN 55325-19-4 CAPLUS

CN  $\beta$ -D-Glucopyranoside, 4-chloro-2-(phenylmethyl)phenyl (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 54 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:58057 CAPLUS

DOCUMENT NUMBER: 82:58057

ORIGINAL REFERENCE NO.: 82:9295a,9298a

TITLE: Chemistry and biochemistry of plant constituents.  
XXXIV. C-Benzoylation of 2',4'-dihydroxyacetophenone  
glycosides with 4-formyl-1,2-phenylene dibenzoate

AUTHOR(S): Reichel, Ludwig; Proksch, Gerhard; Tobien, Gerda  
CORPORATE SOURCE: Sekt. Chem., Humboldt-Univ. Berlin, Berlin, Ger. Dem.  
Rep.

SOURCE: Justus Liebig's Annalen der Chemie (1974), (10),  
1709-12

CODEN: JLACBF; ISSN: 0075-4617

DOCUMENT TYPE:

LANGUAGE: Journal  
German

GI For diagram(s), see printed CA Issue.

AB Reaction of the glycosides I (R = glucosyl or galactosyl, R1 = R2 = H)  
with the dibenzoate II gave the monobenzoyl derivs. I (R1 = COPh), the  
structure of which were proved by nitration yielding I (R = H, R1 = R2 =  
NO2) and I (R = H, R1 = COPh, R2 = NO2).

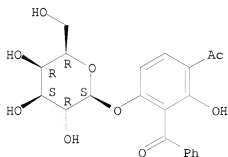
IT 54917-83-8P 54918-25-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and nitration of)

RN 54917-83-8 CAPLUS

CN Ethanone, 1-[3-benzoyl-4-( $\beta$ -D-galactopyranosyloxy)-2-hydroxyphenyl]-  
(CA INDEX NAME)

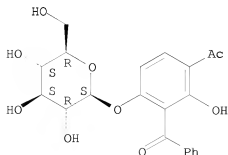
Absolute stereochemistry.



RN 54918-25-1 CAPLUS

CN Ethanone, 1-[3-benzoyl-4-( $\beta$ -D-glucopyranosyloxy)-2-hydroxyphenyl]-  
(CA INDEX NAME)

Absolute stereochemistry.





L4 ANSWER 55 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1959:89189 CAPLUS  
 DOCUMENT NUMBER: 53:89189  
 ORIGINAL REFERENCE NO.: 53:16049h  
 TITLE: A new acyl migration  
 AUTHOR(S): Reichel, Ludwig; Proksch, Gerhard  
 CORPORATE SOURCE: Humboldt Univ., Berlin  
 SOURCE: Naturwissenschaften (1958), 45, 491  
 CODEN: NATWAY; ISSN: 0028-1042  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB Resacetophenone-4- $\beta$ -D-glucoside (I) reacts with dibenzoylprotocatechuic aldehyde at room temperature and in the presence of alkali to give 3-benzoyl derivative of I, m. 194-6°,  $[\alpha]_{20D} -88.8^\circ$  (50% Me<sub>2</sub>CO), which with 1:1 concentrated HNO<sub>3</sub> H<sub>2</sub>O gives 3-benzoyl-5-nitroresacetophenone, m. 114-18°, hydrolyzed with 10% NaOH to BzH and 5-nitroresacetophenone, m. 142°. The reaction mechanism is discussed.

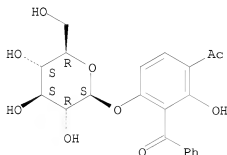
IT 54918-25-1P, Benzophenone, 3-acetyl-6-( $\beta$ -D-glucosyloxy)-2-hydroxy-

RL: PREP (Preparation)  
 (preparation of)

RN 54918-25-1 CAPLUS

CN Ethanone, 1-[3-benzoyl-4-( $\beta$ -D-glucopyranosyloxy)-2-hydroxyphenyl]-  
 (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 56 OF 56 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1939:44193 CAPLUS

DOCUMENT NUMBER: 33:44193

ORIGINAL REFERENCE NO.: 33:6251i,6252a-b

TITLE: Action of triphenylchloromethane on  $\alpha$ -methyl D-mannopyranoside

AUTHOR(S): Watters, A. J.; Hockett, R. C.; Hudson, C. S.

SOURCE: Journal of the American Chemical Society (1939), 61, 1528-30

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB  $\alpha$ -Me D-mannopyranoside (5 g.) and Ph<sub>3</sub>CCl (10 g.) in 50 cc. C<sub>5</sub>H<sub>5</sub>N, refluxed for 3 hrs., give 10 g. of the 6-trityl derivative (I), with 1 mole of C<sub>5</sub>H<sub>5</sub>N, m. 101-2° (all m. ps. corrected), [ $\alpha$ ]D<sub>20</sub> 23.45° (CHCl<sub>3</sub>, c 1.47); the CaCl<sub>2</sub> complex, prepared in EtOH, m. 110-12°, [ $\alpha$ ]D<sub>20</sub> 26.6° (MeOH, c 1.04); it contains 2.5 moles of EtOH of crystallization I (17.2 g.) and Ac<sub>2</sub>O in C<sub>6</sub>H<sub>5</sub>N at 0° (4 days) give 19.5 g. of the 2,3,4-tri-Ac derivative, m. 130°, [ $\alpha$ ]D<sub>20</sub> 44.33° (CHCl<sub>3</sub>, c 1.24); HBr in AcOH gives 2,3,4-triacetyl- $\alpha$ -methyl D-mannopyranoside, m. 98°, [ $\alpha$ ]D<sub>20</sub> 55.54° (CHCl<sub>3</sub>, c 1.14); MeI and Ag<sub>2</sub>O give a sirupy 6-Me derivative, which is hydrolyzed by 2% HCl (90 min. on a boiling water bath) to 6-methyl D-mannose, [ $\alpha$ ]D<sub>20</sub> 15.3° (CHCl<sub>3</sub>, c 1.13); PhNHNH<sub>2</sub> in dilute AcOH gives 6-methylglucosazone. This series of reactions establishes the position of the trityl group in I.

IT 910878-99-8P, Pyridine, compound with 6-trityl- $\alpha$ -mannopyranoside

RL: PREP (Preparation)

(preparation of)

RN 910878-99-8 CAPLUS

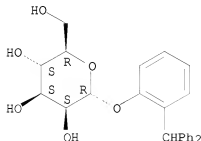
CN Pyridine, compd. with 6-trityl- $\alpha$ -mannopyranoside (4CI) (CA INDEX NAME)

CM 1

CRN 910878-98-7

CMF C25 H26 O6

Absolute stereochemistry.



CM 2

CRN 110-86-1

CMF C5 H5 N



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FILE 'REGISTRY' ENTERED AT 08:45:58 ON 01 JUL 2008

L1 STRUCTURE UPLOADED

L2 7 S L1

L3 320 S L1 FULL

FILE 'CAPLUS' ENTERED AT 08:47:22 ON 01 JUL 2008

L4 56 S L3 FULL

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

314.80

493.83

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-44.80

-44.80

STN INTERNATIONAL LOGOFF AT 08:59:15 ON 01 JUL 2008